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Foreign Agriculture 1992

This publication is designed for U.S. exporters, farm organizations, and others who need a quick, concise guide to foreign agriculture.

“Country Profiles” are presented on 90 countries. Each profile provides key information and data on the country’s agricultural production, policies, and trade. An “Atlas of World Agriculture” follows the profiles. Maps and charts present a global picture of production and trade for major commodities—and also look at some demographic and economic variables related to food demand.

Notes and acknowledgments

The information and country names and borders in this edition reflect analysis and data available as of early 1992. Data sources and the availability of reliable statistics vary considerably by country.

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Albania

Profile of agriculture

Albania is located on the west coast of the Balkan Peninsula. About three-fourths of the land is hilly or mountainous. The climate is Mediterranean near the coast, but much more severe in the highlands.

Although Albania is the poorest country in Europe, in recent decades it has enlarged and diversified its industrial production, and expanded agricultural production sufficiently to feed its rapidly expanding population.

Albania's first multiparty elections since 1944 were held in March 1991. Communists dominated the ensuing Government which collapsed in mid-1991. Democratic forces won the national election held in March 1992.

In the past few years, Albania's economy has been collapsing because of reliance on a failing central planning system and long-standing isolation from the outside world. Albania is also facing a food crisis as a result of inappropriate agricultural policies, distribution problems, and drought since the late 1980's. Basic commodities such as fruit, vegetables, dairy products, meat, sugar,

and rice are rationed or largely unavailable. Food riots and panic buying occurred in several cities in December 1991 and early 1992. Agricultural productivity is held back by farm input shortages, lack of credit, and inadequate infrastructure.

Despite these problems, the interim coalition Government that held power in the second half of 1991 began a variety of reforms, including returning land to private farmers and increasing trade with the West. The emerging private sector has, however, not yet been able to replace the state in carrying out food marketing and processing.

Albanian agriculture is almost completely socialized. As of 1989, state farms accounted for about 30 percent of agricultural production, cooperatives accounted for about 60 percent, and small plots of land given to cooperative farmers accounted for 10 percent.

Production trends

Albania's agriculture is highly labor intensive, with more than one-half of the population employed in farming and forestry. Grain yields are the lowest in Europe. Protein meal use is largely restricted to domestic sunflowerseed meal. Poultry and dairy are the principal agricultural growth areas.

Until recently, Albania claimed to be 85 percent self-sufficient in food production (and 100 percent self-sufficient in wheat production).

The range of crops produced is narrow and quality is often low. Albania's principal crops are cereals (wheat and corn), vegetables, fruits, and sugar beets. Except for growing production of sugar beets, fruits, and milk, outturn of most other commodities was stagnant or lower in the 1980's.

Farm and food policy

Albania's first multiparty elections since 1944 were held in March 1991. The elections resulted in the ruling Socialist Party retaining its control; however, in



Albania at a Glance

Population (1991): 3.3 million

Urban population: 34%

Population growth rate (1991): 1.8%

Per capita income (1990 est.): \$1,250

Land use: Crops 25%, meadows and pastures 15%, forest and woodland 38%, other 22%

Major crops: Wheat, sugar beets, corn, vegetables, fruits

Livestock sector: Beef and dairy cattle, poultry, sheep, goats

Leading agricultural exports: Cognac, raki, tobacco products, fruit, olives, tomatoes, canned fish

Leading agricultural imports: Cereals, edible oils, sugar

Agricultural imports as a share of total imports (1989 est.): 25%

U.S. share of total agricultural imports (1990): 12%

Percent of labor force in agriculture (1989): 51%

Membership in economic or trade organizations: ECE, FAO, IBRD, IMF, UNCTAD

Agricultural Production

	1987	1988
	<i>thous. metric tons</i>	
Crop production		
Cereals	1,010	1,024
Corn	320	306
Wheat	565	589
Fruit (excl. melons)	210	216
Potatoes	135	137
Sugar beets	360	360
Vegetables (incl. melons)	236	236

Animal product output

Beef, mutton and pork	55.0	56.0
Eggs	13.2	14.0
Milk, cow	346.0	347.0

June 1991, the Communist-dominated Government resigned due to a massive labor turmoil and an interim coalition Government was formed.

The interim Government adopted a partial reform program aimed at establishing a market-oriented economy. The program included privatization of small businesses and large state-owned enterprises, price decontrols on most products, currency devaluation, and

leeway for foreign investment. However, two leading parties withdrew from the coalition in December 1991 in protest over the slow pace of reforms, forcing national elections in March 1992.

In March 1992, the Democratic Party defeated the Socialist Party in national parliamentary elections. The new non-Communist Government proposed a program to speed up privatization, price decontrols, and other market-oriented reforms.

Since 1990, farmers have been allowed to sell produce and livestock raised on small private plots. Under a July 1991 land law, the distribution of cooperative property and land to private farmers has been largely completed, with each family receiving about 1 hectare. Privatized land must be used for farming only and cannot be sold for 5 years. Privatization of distribution and processing facilities has started. Food prices for nearly all products have been decontrolled.

Trade trends

Although foreign trade in the 1980's generally recorded a deficit, the agricultural trade balance was positive. This situation could be reversed in 1992 because of the deteriorating economic climate.

Through the 1980's, three-fourths of Albania's exports were industrial, and one-fourth agricultural. Cognac, raki, cigarettes, fruit, olives, tomatoes, and canned sardines and anchovies accounted for about 17 percent of agricultural exports. Albania's agricultural exports in 1990 were valued at \$183 million,

mostly from horticultural products.

Agricultural imports through the late 1980's accounted for between 5 and 8 percent of the total. Since then, a combination of drought, inefficiency, and high population growth has seriously reduced food production. In 1990, Albania imported an estimated \$76 million worth of food products, mostly grains, vegetable oils, and sugar. In 1991/92, Albania's import needs may approach \$200 million. The country must rely on international aid and credit to meet its food needs.

U.S. agricultural exports to Albania rose by \$8 million in 1991, to a total of \$9 million (12 percent of Albania's total agricultural imports), consisting mostly of wheat and butter. For 1991/92, the United States has agreed to provide powdered milk, butter, and wheat under the Food for Progress program. Improved bilateral trade relations and Albania's growing food needs could result in sales opportunities for U.S. grains, oilseeds, pulses, cotton, vegetable oils, and farm inputs. Opportunities exist for U.S. investment in food distribution and processing systems.

U.S. agricultural imports from Albania totaled \$3 million in 1991, nearly all from sage purchases.

The share of Albania's trade with Eastern Europe fell from 65 percent in 1985 to 55 percent in 1989, while its share with Western Europe and Japan rose from 28 to 30 percent.

Trade policy and prospects

The Albanian Government seeks to allow all qualified entities to participate in foreign trade. It also seeks to liberalize existing export and import controls. The key impediments to Albanian food imports include hard currency shortages, licensing requirements, and the preference to conduct trade on a countertrade

or short-term credit basis. No information is available on Albanian agricultural customs duties.

The United States and Albania restored diplomatic relations in March 1991. In May 1992, the United States and Albania signed a trade relations agreement designed to facilitate trade and strengthen economic ties between the two countries. Upon implementation, the 3-year agreement will reciprocally confer most-favored-nation tariff treatment and improve the capacity of U.S. businesses to operate in Albania.

To support Albania's reform efforts, the U.S. Government is providing technical and humanitarian assistance, including an agricultural development program.

The European Community (EC), in particular Italy, also has provided extensive food aid to Albania. The EC and Albania signed a trade and economic cooperation agreement in May 1992.

Albania recently joined the International Monetary Fund (IMF) and the World Bank, which may lead to increased international aid and closer ties to western countries. ■

Algeria

Profile of agriculture

Agriculture plays an important role in the Algerian economy, accounting for about 8 percent of the gross domestic product and employing nearly a quarter of the labor force. Algeria is a middle-income developing country with an annual per capita income estimated at \$2,130. With 26.0 million people, Algeria has one of the fastest growing populations in the world.

Although Algeria is one of the largest countries in Africa, only 16 percent of the land area is suitable for agricultural use, while less than 3 percent is intensively cultivated.

Agricultural Production

	1989	1990
	<i>thous. metric tons</i>	
Crop production		
Barley	789	833
Citrus	200	280
Dates	210	206
Olives	92	178
Potatoes	1,007	809
Table grapes	119	81
Vegetables	1,463	1,188
Wheat	1,152	750
Wine grapes	102	72

	<i>mil. head</i>	
Livestock numbers		
Cattle	1.4	N.A
Goats	2.4	N.A
Poultry		
Broilers	200	200
Layers	16	15
Sheep	17.3	N.A

	<i>thous. metric tons</i>	
Animal product output		
Beef	85	90
Eggs ¹	3.4	2.6
Lamb and mutton	129	134
Milk	970	1,900
Poultry meat	258	255

¹ Billion eggs.

The country is divided into three distinct geographic regions that roughly parallel the Mediterranean Sea.

The fertile northern coastal plain is characterized by mild, wet winters and hot, dry summers. This region is best suited to intensive agriculture, but only includes 3 percent of the total land area.

Further inland, located between the coastal plain and the desert, is the relatively high plateau region. This region's cold winters and hot summers make it suitable for extensive cereal production and livestock farming.

Sheep, the principal livestock, spend the winter on the open range and then, in the spring and summer, are herded north to the cereal zone. There they graze the stubble left from the wheat and barley harvests.

South of this region is the vast Sahara Desert, characterized by a harsh, dry climate, sparse population, and limited cultivation in the oases.

Agricultural production is constrained by a lack of supplies and equipment, a poorly educated rural population, and an underdeveloped marketing infrastructure.

The lack of irrigation and the losses of arable land to desert encroachment compound drought-related problems. Less than 1 percent of the agricultural land is irrigated. With most agricultural production dependent on poorly distributed, erratic, or scarce rainfall, crop yields fluctuate widely from year to year.

Erosion is a major problem in the north, where significant amounts of topsoil are carried into the sea each year. Forest fires and overgrazing have aggravated the problem.

Wheat and barley are the most important crops. They are planted on about 40 percent of the agricultural land and account for 20 to 25 percent of the value of agricultural output.



Algeria at a Glance

Population (1991): 26.0 million

Urban population: 50%

Population growth rate: 2.5%

Per capita income (1990): \$2,130

Land use: Crops 3%, meadows and pastures 13%, forest and woodland 2%, other 82%

Major crops: Cereals, vegetables, citrus, olives, dates, wine and table grapes

Livestock sector: Poultry, sheep, goats, dairy and beef cattle

Leading agricultural exports: Wine, dates, fish

Leading agricultural imports: Grains, dairy products, wood, edible oils, soybean meal, hides and skins, cotton, planting seeds, sugar, coffee, wheat products

Agricultural imports as a share of total imports: 28%

U.S. share of total agricultural imports: 20%

Percent of labor force in agriculture: 24%

Membership in economic or trade organizations: FAO, IBRD, IDA, IMF, IWC, OAU, OPEC

The Government has established feedlots, dairies, and broiler and egg farms, but output remains relatively low. Livestock products contribute about a fourth of the total value of Algeria's agricultural output.

Production trends

Algerian agricultural prospects remain uncertain despite Government

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Barley	37	55
Corn	125	99
Cotton	19	41
Dairy products	503	2
Hides and skins	40	37
Paper pulp	46	77
Pulses	61	19
Rice	2	100
Soybean meal	103	98
Tobacco	12	10
Vegetable oil	139	13
Wheat	421	31
Wood	298	13
All agricultural products²	2,834	20

¹ Values are shown in U.S. dollars at U.S.\$1=8.7 Algerian dinars.

² Includes products not listed.

reforms introduced to stimulate production. Algerian cereal production is extremely variable, a consequence of frequent droughts. Wheat remains the principal grain crop, with production during the past 10 years averaging 1.2 million metric tons. Barley is the other major grain crop, and its production about equals that of wheat. Because of the rapid increase in the population, self-sufficiency levels for wheat dropped from 90 percent in 1962 to 20 percent in 1990.

The vegetable sector functions largely on a free-market basis. Production of vegetables such as carrots and legumes is virtually self-sufficient. However, supply can be limited in drought years (in 1990 Algeria was forced to import potatoes) and is strictly seasonal.

The fresh fruit sector, notably table grapes, is showing signs of vitality, but

the once productive citrus sector is stagnating. Citrus production declined from a high of 517,000 tons in 1974 to 280,000 tons in 1990. The Government is attempting to stimulate this sector, but prospects remain mixed.

Date production has remained constant at about 200,000 tons a year for the past 10 years, but insect infestation is still a major problem.

Farm and food policy

A decline in oil export earnings, as well as organizational problems in the agricultural sector have forced Algeria to reorient its agricultural structure from large, state-operated farms to small, privately operated units. The Government hopes that the new system of cooperatives and individually owned farms will eventually produce more food and reduce import needs.

Support prices for producers of cereals and pulses are well above the world prices. Other agricultural goals include developing seed varieties better suited to the climate; developing arable land in the south and on the high plateau, with an emphasis on irrigation; promoting production of grains, pulses, and tomatoes; and improving productivity in the livestock and poultry sectors.

Trade trends

Algeria is a net agricultural importer with purchases totaling \$2.8 billion in 1990 versus sales of \$53.0 million. Agricultural imports accounted for 28 percent of the total \$9.9 billion Algeria spent on imports in 1990, and supplied approximately two-thirds of domestic consumption needs.

The sale of U.S. agricultural products has expanded rapidly in Algeria since the inception of the U.S. credit guarantee programs in 1986. The U.S. share of agricultural imports climbed from 8 percent in 1986 to 20 percent in 1990, and was expected to stay at that level in 1991. In fiscal year 1990, Algeria was the

second largest recipient of U.S. credit guarantees. Algeria is among the top U.S. export markets for wheat, corn, and soybean meal.

Major agricultural exports by value include wine, dates, and fruits and vegetables.

After years of discouraging the production of wine for religious reasons, the Government now promotes it to increase export earnings.

Trade policy and prospects

Algeria's primary goal is to import basic commodities to maintain an adequate supply of foodstuffs for its rapidly growing population. With the recent decline in foreign exchange earnings and the draw-down of currency reserves, the Government has placed increased emphasis on agricultural exports. However, efforts remain hampered by inadequate production levels which barely supply the expanding domestic market.

Imports of cereals, which are considered strategic commodities, are handled by the Government's cereals office. Other commodities are imported by quasi-Government agencies which have some independence, but whose capital remains in the hands of the Government. Consequently, their business activity is subject to close government oversight. The long-term goal is to privatize these agencies.

Given Algeria's precarious financial position, heavy debt burden, and need to finance basic agricultural imports, Algeria will continue to depend heavily on credit. The United States successfully expanded agricultural exports to Algeria largely because of its credit guarantee programs. Future prospects for U.S. exports will depend on the continued availability of credit guarantees. ■

Argentina

Profile of agriculture

Argentina extends nearly 2,150 miles from Bolivia in the north to Cape Horn in the south. Its greatest breadth is nearly 1,000 miles. The country is divided into four main geographical

regions: the Andes Mountains in the west; the forest and flood plain of the north and Entre Rios; the fertile Pampa plains; and Patagonia in the south.

With its diverse climate and abundant natural resources, Argentina produces, exports, and imports many of the same agricultural products as the United States. In northern tropical regions, sugarcane, cotton, tea, and tobacco are grown. Grains, oilseed, and livestock production predominate in the vast, temperate central plains. In the west, fruit production is most important, while the desolate reaches of Patagonia to the south are limited to sheep production.

The size and sophistication of farms varies greatly—from large estancias and modern dairies which use the latest in farm technology to small, labor-intensive family cotton farms. The practice of dividing land equally among sons and daughters has, in some regions, reduced the land holding pattern to small, uneconomical units.

Years of economic instability and import substitution policies which transferred wealth from rural to urban sectors have left agriculture under-capitalized. A general lack of infrastructure, services, and rural development has forced land owners to live in urban areas, leaving hired labor to oversee day-to-day farm operations. Contractors commonly seed and harvest field crops. On-farm owner-operators are relatively few in number.

Agriculture claims 38 percent of Argentina's gross domestic product and 12 percent of the labor force. Agricultural exports, at \$7- \$8 billion, represent about two-thirds of the total. Despite the dominant role of agriculture in Argentina, only 14 percent of the population is classified as rural. A full third of the country's population lives in the capital city of Buenos Aires.

Production trends

In the absence of Government price support programs, the area planted to



Argentina at a Glance

Population (1991): 33.3 million

Urban population: 86%

Population growth rate: 1.5%

Per capita income (1991): \$4,203

Land use: Crops 13%, meadows and pastures 52%, forest and woodland 22%, other 13%

Major crops: Sugarcane, soybeans, wheat, corn, sunflowerseed, grain sorghum, flaxseed

Livestock sector: Beef and dairy cattle, poultry, sheep, horses, swine

Leading agricultural exports: Oils and meals, grains, beef, animal products, fruits and fruit products, oilseeds, dairy products, wool, vegetables, cotton

Leading agricultural imports: Coffee, fruits, cocoa, seeds, cotton, cork, resins, seeds, essential oils

Agricultural imports as a share of total imports (1990): 5%

U.S. share of total agricultural imports: 11%

Percent of labor force in agriculture: 12%

Membership in economic or trade organizations: ABUP, ALADI, ECLA, FAO, GATT, IBRD, IFAD, IFC, IMF, ITC, OAS, UN

Agricultural Production

	1989/90	1990/91
	thous. metric tons	

Crop production ¹

Corn	5,200	7,600
Cotton lint	277	295
Fruits	2	2
Potato	2	2
Sorghum	2,000	2,250
Soybean	10,075	11,000
Sugar cane	10,600	12,520
Sunflowerseed	3,820	3,900
Tobacco	70	80
Wheat	10,150	10,500

	1990	1991 ²
	mil. head	

Livestock Numbers

Cattle		
Beef	48.0	48.0
Dairy	2.0	2.0
Hogs	2.1	2.1
Horses	3.4	3.4
Poultry	36.3	38.3
Sheep	27.6	26.0

	thous. metric tons	
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Animal product output ¹

Beef and veal	2,650	2,640
Cheese	270	280
Eggs ⁴	3,900	43,500
Hides	307	308
Milk		
Fluid	6,400	6,200
Dry	160	130
Poultry meat	119	101
Wool	148	130

¹ Crop years vary by commodity.

² Not available.

³ Estimated.

⁴ Million eggs.

grains and oilseeds follows international price signals that reflect world supply and demand conditions.

Argentina produces 30 to 35 million tons of grains and oilseeds per year. In

Value of Agricultural Imports, 1990

	Total imports \$ mil. ²	U.S. share %
Selected Products		
Cocoa	23.3	²
Coffee	36.8	0
Cork	7.5	³
Cotton	13.0	2
Essential oils	3.4	26
Fats and oils, animal and plant	6.2	31
Fruits	32.0	4
Live animals	5.6	42
Resins, pectins, agar	6.6	14
Seeds	16.0	54
Spices	2.4	0
Wood	20.7	4
All agricultural products¹	215.0	11

¹ Calendar year.

² Values are shown in U.S. dollars based on 1989's average exchange rate of U.S.\$1=4,883 australes.

³ Less than 0.5%.

⁴ Includes products not listed.

the past 15 years, soybean production grew from virtually zero to over 10 million tons. This increase occurred largely at the expense of feed grains. Growth in the soybean area has leveled off, and corn has begun to make a comeback as it is returned to the crop-rotation cycle.

As a result of the continuous planting of soybeans, the soil has lost organic matter and lacks good water holding capacity. Crop rotation is an intrinsic component of Argentine grain, oilseed, and livestock production systems which can be characterized as low input.

Interest is growing in production and trade of nontraditional agricultural products, including fresh and/or processed horticultural products. Deciduous fruit and citrus are growing in relative importance and multinational trading

companies are diversifying their operations in Argentina to include fresh fruit and juice exports.

High transportation costs have typically impeded agricultural production outside of the centrally located 'pampa humeda' (the pampas). The trend to deregulate the economy should facilitate the expansion of nontraditional products in outlying regions.

Farm and food policy

After years of burdensome state controls, the Government is attempting to expand production and exports by converting Argentina into a free-market economy. Reform has quickened and now holds important implications for the agricultural sector.

One reform—a system of export taxes which for years was the primary source of Government revenue—was all but eliminated during 1991. The old export tax was replaced by a value-added tax applied across all sectors of the economy.

Many import restrictions have been removed and tariffs greatly reduced. To combat inflation, the Government has welcomed imports of selective products despite the vocal complaints of special interest groups. Under recent deregulation decrees, those Government bodies which regulated marketing of meat and grain since World War II were eliminated. Government-owned country and port elevators are being sold in the hope that the private sector will operate the facilities more efficiently.

Trade trends

Argentina enjoys a large agricultural trade surplus. It is a surplus producer of some commodities, and self-sufficient in many others. At \$7.5 billion, 1990 agricultural exports dwarfed imports estimated at about \$215 million.

Principal exports are oilseeds and products, meat products, and grains. Major imports are coffee, fruits, wood, cocoa, cotton, resins, and seeds.

Agricultural imports from the United States rose slightly in 1990 to \$28 million. Major U.S. exports by value were seeds, grains, essential oils, fats and oils, breeding livestock and poultry, and animal semen.

Argentina's exports to the United States in 1990 rose to \$372 million. Leading export commodities were beef, fruit and juices, sugar, vegetables, dairy products, and tobacco.

Trade policy and prospects

Historically Argentina has protected its domestic agricultural sector through the use of relatively high import tariffs, inspection fees, and various registration systems. However, the movement to liberalize the economy has opened the Argentine food sector. An effect of the economic stability plan introduced in 1991 is to maintain the Argentine *peso* at a relatively high level against the U.S. dollar. Combined with import liberalization laws, this measure provides increased opportunity for U.S. agricultural exports in 1992. Imported high-value processed products are becoming the fashion in Buenos Aires and sell well, despite large retail markups.

Argentina has relatively few policies that promote agricultural exports. The most visible program is the use of differential export taxes to promote the processing of raw materials. In the past, the Government placed a high tax on exports of raw materials (especially oilseeds such as soybeans, sunflower, and flax) while fixing a much lower tax rate on the processed products such as oilseed meal and oil. Differential export taxes were also used for many other commodities, such as wool, cotton, fruit products, and meat.

While taxes were eliminated on most products, the 6-percent tax on oilseeds effectively maintains the differential as oilseed product taxes were reduced to zero. An export ban on raw hides serves the same purpose for leather goods. ■

Australia

Profile of agriculture

Farming in Australia contributes about 3.5 percent of the gross domestic product and employs less than 5 percent of the population, but contributes over 20 percent of the total exports of the country. Broad-acre agriculture (all crop or livestock farming except dairy and horticulture) is primarily restricted to

the coastal areas where rainfall is sufficient. Extensive agriculture (sheep and beef cattle raising) takes place in the interior portions of the continent.

Since 1987/88 net cash farm income has fallen for 4 straight years. The 1990/91 net cash farm income level is about 50 percent below that of 1987/88. Low world prices for most agricultural products and rising input costs have contributed to this erosion of farm sector returns.

Most Australian farms raise both wheat and sheep or beef cattle. Wool is the top agricultural product in value, followed by beef and wheat. Production of milk, vegetables, fruits, nuts, and sugarcane is also important.

With a climate which takes in the extremes of tropical to temperate zones, Australia produces almost everything produced in the United States, but on a somewhat smaller scale.

Production trends

Agricultural production fell in 1991 due to a prolonged drought which affected most of the state of Queensland and a good portion of the state of New South Wales. Both of these states are important production areas for wheat, cattle, and sheep.

In addition to the fall in production levels, low world prices for most agricultural products continued to reduce farm income. In 1990/91, the gross value of farm production fell by 10 percent, and the net value fell by 69 percent. Further declines are expected in 1991/92 because world prices will probably lag, and production will be hurt by the drought.

Wool production in 1990/91 fell by 16 percent. This drop reflects the results of lower wool prices because of the removal of the Wool Reserve Price Scheme which had put a floor under wool prices. Without the floor, wool prices tumbled by almost 35 percent and the wool market has remained weak



Australia at a Glance

Population (1991): 17.3 million

Urban population: 83%

Population growth rate (1991): 1.5%

Per capita income (1990): \$14,900

Land use: Crops 6%, meadows and pastures 58%, forest and woodland 14%, other 22%

Major crops: Sugarcane, wheat, barley, oats, potatoes, sorghum, rice, grapes, citrus, cotton

Livestock sector: Wool, beef cattle and calves, sheep, dairy cattle, hogs, poultry

Leading agricultural exports: Wool, wheat, meat, sugar, cotton, barley, rice

Leading agricultural imports: Forest products, leather and furskins, tobacco, whiskey, nuts, fish products

Agricultural imports as a share of total imports: 6%

U.S. share of total agricultural imports: 15%

Percent of labor force in agriculture: Less than 5%

Membership in economic or trade organizations: APEC, FAO, GATT, ICAC, IMF, IRC, ISO, IWC, OECD, WFC, WSG

Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production ¹		
Apples	315	350
Barley	4,096	4,055
Citrus	649	580
Cotton	305	422
Grapes	584	820
Oats	1,638	1,500
Potatoes	1,166	1,075
Rice	923	846
Sorghum	920	883
Sugarcane	27,622	27,567
Wheat	14,121	15,068

		<i>mil. head</i>	
Livestock numbers			
Cattle			
Beef	20.10	22.00	
Dairy	2.50	2.50	
Hogs	2.61	2.85	
Sheep	173.00	165.60	

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	1,678	1,888
Butter	106	114
Cheese	175	170
Lamb	295	300
Milk ²	6,262	6,350
Mutton	333	337
Pork	317	304
Poultry meat	419	432
Wool	1,100	920

¹ July-June crop year.

² Million liters.

because of sizeable unsold stocks.

Sheep numbers dipped by some 4 percent in 1990/91. Further major declines are expected in the 1991/92 year, as lower wool prices and the effects of the drought are reflected. These lower sheep numbers will bring wool production more into line with expected demand on the world market.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Fish products	122.0	²
Forest products	350.0	26
Leather and furskins	75.7	1
Nuts	58.2	36
Tobacco	80.0	45
Whiskey	47.1	27
All agricultural products³	1,598.7	15

¹ Values shown in U.S. dollars at U.S.\$1 = \$1.28 Australian dollars.

² Less than 1 percent.

³ Includes products not listed.

Because of the drought, cattle slaughter in 1990/91 increased. Further increases are expected in the 1991/92 year as fodder supplies remain limited due to the continued drought.

Cattle feeding has become more important; feedlots with a combined total capacity of over 500,000 head are expanding.

Wheat production fell to less than 10 million tons in the 1991/92 year. This decline of over a third from 1990/91 left Australia unable to fulfill some of its long-term supply agreements. With back-to-back financially disastrous years, many wheat farmers are looking for continued financing to grow the 1991/92 crop. This situation may limit the amount of wheat grown in Australia in the future.

Cotton production continues to expand, as Australia finds its cotton well accepted in Asian markets. Although financial returns are expected to be somewhat less than in the 1991/92 year, cotton farmers continue to expand both irrigated and dryland acreage.

The sugar industry was also hurt by the drought. Lower yields and less

acreage harvested reduced income in this industry. Longer term prospects are not promising because world markets for sugar continue to be distorted by other countries' production and trade practices.

The dairy industry continued to show more production per cow. This industry continued to expand slightly in the 1991/92 year.

Farm and food policy

Over the past 6 years, Australia has moved from being one of the most regulated agricultural economies to one almost free of Government interference with the market. This deregulation has been painful and has not been universally applauded, but it has placed the country in an advantageous position to compete in world markets, when and if domestic and export subsidies of other countries are removed.

Australia used national and state corporations, or marketing boards, to oversee producer-price stabilization programs and/or to unify the export marketing and promotion of many agricultural commodities; including wheat, barley, sugar, dairy products, horticultural products, wine, and tobacco. Price-stabilization pools are largely financed by producers. Research programs, tax concessions, adjustment assistance, disease control, local content schemes, disaster relief, and marketing services also provide significant assistance to producers.

Trade trends

Australia enjoys a large surplus in its agricultural trade and exported \$10.7 billion worth of agricultural products in 1990/91, compared to imports of agricultural products of about \$1.6 billion.

Wool, beef, and grain account for over two-thirds of the value of Australia's agricultural exports. About four-fifths of the wheat and barley produced is exported, as is almost three-

quarters of the rice, sugar, and cotton. Over 50 percent of the total beef production is exported, with the United States the major market. Almost all of the wool produced is exported.

Exports of these major commodities are expected to change somewhat over the next 2 years. Wool and wheat exports will be reduced somewhat in the 1992/93 year due to the effects of the 1991 drought. However, after that 1 year of lower production and exports, these commodities are expected to return to their normal levels. Beef exports, on the other hand, are expected to remain at their current level or grow slightly in the near term, with greater quantities being shipped to the North Asian market.

Major agricultural imports in 1990/91 included forest products, fish, leather and furskins, tobacco, nuts, and whiskey.

Australia imported \$239 million worth of agricultural products from the United States.

Trade policy and prospects

Many imports are prohibited or severely limited by strict plant or animal health regulations. Livestock imports are limited to breeding animals and genetic materials, and there are practically no meat imports. Plant quarantine regulations keep out many horticultural products, such as apples, pears, and avocados. These strict plant and animal health regulations are not expected to change.

Internationally, Australia continues to play a major role in the effort to reform agricultural trade. During the Uruguay Round of Multinational Trade Negotiations, the country has actively campaigned for abolishing or reducing subsidies, both domestic and export, in agriculture. ■

Austria

Profile of agriculture

Most Austrian farms, like those of other mountainous European countries, are small and fragmented, and their products are relatively expensive. Over half of all farms are part-time operations. In 1990, agriculture and forestry accounted for 3 percent of Austria's gross domestic product. This is slightly below the long-term average of about 5 percent. Of this share, agriculture accounted for 83 percent, and forestry 17 percent.

Dairy products, cattle, and grains are the three major commodities produced, although Austria also grows a wide range

of other temperate crops. Dairy farming and the production of breeding cattle are carried out mainly in hilly and mountainous areas around the Alps. Cattle fattening is largely found in the foothills and the lowlands where corn for silage and grain is grown. Cattle breeding and forestry are the principal activities further west in higher areas.

Principal agricultural areas are the regions north of the Alps and along both sides of the Danube to the plains of the eastern border.

Approximately 60 percent of agriculture is accounted for by small-scale farms of 2-10 hectares, many of which are family owned. However, the buying of inputs and marketing of production is increasingly carried out on a cooperative basis. Thanks to extensive mechanization, often through rural machinery pools, labor productivity has almost doubled since 1970.

Austria's grain belt is the region around Vienna. Until the mid-1970's, relatively large imports were necessary. However, a slight area increase and a rapid rise in yields boosted production beyond the point of self-sufficiency, and Austria became a net grain exporter. Wheat, corn, and barley are the three major grains produced.

Production trends

More than half of the output value of the agricultural and forestry production is accounted for by livestock and livestock products. Within this sector milk production is most important.

While cattle production exceeds domestic requirements by more than 40 percent each year, almost all pork can be sold on the domestic market.

Chicken production has stabilized at a high level. However, due to the rising demand, turkey production is increasing.

Austria intends to reduce the large overproduction of grains. In the future, the oilseed area will probably be expanded further at the expense of the grain area. In 1989, the first crushing plant for



Austria at a Glance

Population (1990): 7.6 million

Urban population: 64.5%

Population growth rate: 0.1%

Per capita income (1991): \$20,821

Land use: Crops 18%, meadows and pastures 24%, forest and woodland 39%, other 19%

Major crops: Sugar beets, corn, barley, wheat, apples, wine

Livestock sector: Poultry, hogs, dairy and beef cattle

Leading agricultural exports: Forest products, fruits and fruit products (especially concentrated apple juice) coffee, tea, cocoa, spices, beef, cheese, live cattle, wheat, bread and biscuits

Leading agricultural imports: Forest products, fruits, coffee, vegetables, soybean meal

Agricultural imports as a share of total imports: 7%

U.S. share of total agricultural imports: 3%

Percent of labor force in agriculture: 8%

Membership in economic or trade organizations: CCC, EFTA, FAO, GATT, IBRD, ICO, IDA, IMF, ISO, IWC, OECD, UNCTAD, WFC (observer status)

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production ¹		
Apples	268	243
Barley	1,512	1,424
Corn	1,544	1,500
Rapeseed	85	111
Sugar beets	2,494	2,406
Sunflowerseed	53	72
Wheat	1,403	1,375

	<i>thous. head</i>	
Livestock numbers ²		
Cattle	2,562	2,583
Dairy	951	951
Chicken	14,145	13,139
Hogs	3,773	3,688
Sheep	289	309

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	223	233
Butter	40	41
Cheese	87	84
Eggs ³	1,664	1,685
Milk	3,315	3,300
Pork	406	403
Poultry meat	78	80

¹ Denotes year harvested.

² At start of year.

³ Million eggs.

the production of oilseed and edible oils went into operation. Since then, several additional, smaller mills began operations. The oil output of these mills is intended for fuel use.

Sugar beet production can vary considerably. The planted area depends mainly on the size of sugar stocks and the export outlook. Apples are the main fruit

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Coffee, tea, cocoa, spices	368	0
Feeds, miscellaneous	201	2
Forest products	690	3
Fruits and products	606	3
Grains and products	180	8
Vegetables and products	263	1
All agricultural products²	3,658	3

¹ Values are shown in U.S. dollars at U.S.\$1=11.37 Schillings.

² Includes products not listed.

produced in the country. The apple area is rising slightly. The production of concentrated apple juice is an important segment of the food industry. Wine production is carried out in the eastern areas and the lower Danube valley. About 80 percent of the total wine area is used for white wine. Since Austria has had difficulties in exporting its wine, it intends to reduce the wine area.

In the mountain areas, forestry is an important income source of many farmers. The value of forest products accounts for 20 percent of the total agricultural and forest output value.

Farm and food policy

Austrian agricultural policy emphasizes self-sufficiency. Crop production is planned through a system of price checkoffs, production controls, and subsidies.

Austria has some of the highest agricultural prices in Europe to help maintain farm income. Producer prices are set for a number of basic commodities, but price controls also apply at the wholesale and retail levels for several products. The central policy goal is to curb the reduction of the number of farms. For this reason, a shift to a more market-oriented agricultural system

seems unlikely. The greatest concern is for the continued viability of small mountain farms and farms in the economically weak areas at the eastern border.

Austrian livestock policy discourages large-scale production. However, even with restrictions, the large production of pork and especially beef, remains a problem in the eyes of policymakers.

High price supports for grains and dairy products have resulted in surplus production. To reduce these surpluses, the Government buys up milk production quotas and encourages producers to shift grain area to alternative crops, especially oilseeds.

The Government introduced new regulations to make Austrian dairy products more price-competitive with other European producers. Based on these regulations, which permit more independent action by dairies, most dairy cooperatives merged into one company in 1990. While Austria intends to reduce overcapacity and close obsolete dairies, progress has been slow.

Expansion in the use of crops as an energy source is also viewed as a possible solution to surplus problems. Environmental protection has become one of the dominant issues on the agricultural policy agenda. Current concerns range from contamination of groundwater by farm chemicals to the preservation of forests from industrial and automobile emissions.

Trade trends

Austria is a net importer of agricultural products, buying \$3.6 billion worth in 1990 versus exports of \$3.1 billion.

The European Community (EC) is Austria's major trading partner. Austria also maintains close relations with Eastern Europe, often subsidizing sales of surplus commodities to that area.

Major imports include forest products coming mainly from Germany and Czechoslovakia. Fruits and vegetables are mainly imported from the Netherlands and the Mediterranean countries.

In general, the most important supplier is Germany. Since Austrian importers are relatively small, it is frequently more convenient for them to buy through large German traders. These traders also supply a large share of the tropical products, soybean meal, and rice.

Austrian agricultural exports include predominantly fresh and frozen beef, cheese, live cattle, grains (with the major share going to Eastern Europe), fruit juice, bread and biscuits, beverages, chocolate products, and coffee.

Austrian imports from the United States usually account for 3 percent of total imports. However, the actual quantity is larger, since many U.S. items are processed or packed in EC countries, particularly Germany, and imported as European products. The principal items coming from the United States are forest products, fruits and products (especially fresh and dried fruit), grains and products (mainly rice), beef, tobacco, and cotton. Major items going to the United States are cheese, apple juice, bakery products, chocolate, and beverages.

Trade policy and prospects

Austria is a highly developed and protected market. Export subsidies and import restrictions, such as tariffs and licenses, are used extensively for major farm products to protect domestic producer prices. Imports of grain, dairy and meat products, and wines require an import license. Of the major agricultural items, only imports of rice, oil meals, and vegetable oils are unrestricted.

In July 1990 Austria applied to become a member of the EC. Within the agricultural sector, some concerns remain that EC membership would hurt Austria's small family farms. ■

Bangladesh

Profile of agriculture

Bangladesh remains primarily an agrarian country, though it has been experiencing industrial growth and urbanization. Agriculture employs 61 percent of the labor force and contributes almost 40 percent of the country's gross domestic product (GDP).

Bangladesh lies in an extremely rich delta plain with some low hills on the eastern boundary. Although the country

is well-endowed with agricultural resources, its fast-growing population must contend with uncertain monsoon rains, frequent floods, and occasional typhoons in the struggle to earn a livelihood from the land. Most of the country lies only 1 to 3 meters above sea level.

Land holdings are small and fragmented, and farmers and family members consume most of what they produce. Field crop cultivation remains the dominant agricultural activity, and rice alone accounts for 25 percent of Bangladesh's GDP. Rice planting and harvesting is done almost continuously in many areas of the country, but tradition identifies three seasonal crops: "aus" harvested in June, "aman" harvested in October, and "boro" harvested in the dry season in March. Bangladesh has reached a precarious self-sufficiency in rice production, largely due to increased irrigation and improved seeds.

The pattern of Bangladesh's agriculture has shown a gradual change—moving away from high-risk, monsoon-dependent aus and aman crops to lower risk, irrigation-based, boro crops. Production remains human labor-intensive, with animals as the chief additional source of power on the farm.

The livestock and poultry sectors are in the infant stage, and together contribute 6 percent to the GDP and employ 18 percent of the population. Most cattle are kept by farm households and fed crop residues. Likewise, chickens in small numbers are kept in most rural households. The country's few commercial poultry farmers are confined to the outskirts of larger cities. Availability of commercial poultry feed is limited.

Production trends

Rice will remain the mainstay of Bangladesh agriculture, and while there is no room for an increase in planted area, yields will continue to rise. Greater



Bangladesh at a Glance

Population (July 1991): 116.6 million

Urban populations: 15%

Population growth rate: 2.3%

Per capita income: \$208

Land use: Crops 69%, meadows and pastures 4%, forest and woodland 16%, other 11%

Major crops: Rice, sugarcane, potatoes, wheat, jute, sweet potatoes, rapeseed, yellow peas, tea, tobacco

Livestock sector: Poultry, cattle, goats, sheep, buffalo

Leading agricultural exports: Leather, frozen frogs' legs, shrimp, jute, tea

Leading agricultural imports: Wheat, edible oils, cotton

Agricultural imports as a share of total imports: 20%

U.S. share of total agricultural imports: 20%

Percent of labor force in agriculture: 61%

Membership in economic or trade organizations: CCC, FAO, GATT, IBRD, SAARC

use of fertilizer and modern seed varieties, as well as irrigation at crucial times, have increased yields of the monsoon and dry season crops. Total rice production is forecast to reach a peak of 18.4 million metric tons in 1991/92 with further increases forecast.

Jute, once considered the mainstay of commercial agriculture in Bangladesh and until recently the largest export earner, is declining in significance. Today, jute is grown mainly on low-lying lands not suitable for other crops during the monsoon season.

Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production ¹		
Jute	842	952
Potatoes	1,066	1,100
Rapeseed	217	225
Rice	17,860	17,860
Sugarcane	7,423	8,380
Sweetpotatoes	512	550
Tea	39	40
Tobacco	38	40
Wheat	890	1,004
Yellow pea	155	160

	1984 ²
	<i>thous. head</i>
Livestock numbers	
Buffalo	567
Cattle	21,495
Goat	13,558
Poultry	73,713
Sheep	667

	1990/91
	<i>thous. metric tons</i>
Animal product output ³	
Eggs ⁴	2,000
Meat	445
Milk	1,350

¹ July-June crop year.

² Latest survey. Since 1984, the cattle population has increased by about 0.5 percent per year, while goat, buffalo and sheep populations have stagnated.

³ Growth rates in recent years for milk, meat and eggs are estimated at 1.8%, 2.3% and 4.7%, respectively.

⁴ Million eggs.

Value of Agricultural Imports, 1990/91

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Cotton	68	28
Edible oil and oilseeds	169	2
Wheat	297	38
Others ²	160	1
All agricultural products	694	20

¹ Values are shown in U.S. dollars at U.S.\$1=35.7213 take. Includes commercial and concessional imports.

² Estimated.

Tea is a major cash crop grown in the northeastern region of the country, but yields are extremely low, and output is not increasing substantially.

Sugarcane production increased significantly in recent years as a result of an enhanced support price for cane purchased by public sector mills, and continued high prices for country-made brown sugar. Centrifugal sugar production reached a record 262,000 metric tons in 1990/91.

Improved storage and transportation facilities have encouraged potato farming. Total production of potatoes in 1990/91 is estimated at 1.65 million metric tons, compared to 420,000 metric tons only a decade ago.

Farm and food policy

Self-sufficiency in food grain production has been a goal of the Government since independence in 1971. Despite notable successes, Bangladesh is struggling to keep agricultural output ahead of population growth. Gains in food grain output have not been balanced by increases in production of other food crops like oilseeds and pulses, resulting in a much lower than expected gain in the nutritional status of the population as a whole.

The Government runs a wide range of food-for-work and relief programs for the poor for which Government purchases of wheat and rice under price support/stabilization programs are supplemented with food obtained from foreign donors. Outside these market interventions, most domestic food trade is in private hands.

There is a movement to gradually decrease the Government's role in the food economy. First steps have included freeing up imports of fertilizer, irrigation equipment, and small-scale farm machinery.

Trade trends

Bangladesh is a net agricultural importer, with imports of \$694 million versus exports of \$474 million in 1990/91. In 1990/91 the trade deficit declined, largely because of decreased imports of grains, sugar, and cotton. Export performance remained strong, which was noteworthy in light of the interruptions from the political strikes of 1990, the Gulf War, and the disastrous cyclone which struck the southeastern coast in April 1991.

Wheat imports rose to 1.57 million metric tons in 1990/91, from 1.23 million tons in 1989/90. Most imported wheat is obtained free or on highly concessional terms from foreign donors, both bilateral (the United States, Canada, Australia, and Japan) and multilateral (the World Food Program and EC). Several excellent rice crops in succession have led to the suspension of commercial rice imports in recent years, though small quantities continue to come in under donation programs.

To meet its rapidly growing food needs, Bangladesh will continue to require large volumes of wheat imports, especially in years when natural disasters occur. These may be balanced by rice exports of roughly the same magnitude. However, these imports will be constrained by the country's limited hard

currency reserves and dependency upon the availability of foreign aid.

Edible oil imports have decreased from a peak of 597,000 tons in 1989/90 to 400,000 tons in 1990/91 as the Government attempts to restrict imports to maintain foreign exchange. Import tariffs favor soybean oil, but palm oil enjoys price and locational advantages which are gradually eroding soybean oil's place in the market.

Cotton imports have increased greatly as a result of the expansion of the textiles and export garment industries. Pakistan has overtaken the U.S. lead as a major supplier, but the United States claims an 18-percent share of the market. Sudan and India are also active suppliers.

While no sugar is currently being imported through official channels, large quantities are being brought across the borders from India, where sugar prices are much lower.

The country is chronically deficient in pulses and milk and milk products. The shortage in milk powder has been partially covered by imports from New Zealand, Australia, and the Netherlands.

The most promising agricultural exports for Bangladesh are leather, frozen frogs' legs, and shrimp. Jute and tea exports have declined in relative importance.

Trade policy and prospects

Bangladesh maintains a restrictive import policy for most commodities, but has begun a phased policy of import liberalization. To strengthen and diversify export production, the Government is phasing out import restrictions on items needed by exporters and is extending special bonded warehouse facilities to new potential export sectors. ■

Belgium-Luxembourg

Profile of agriculture

The importance of agriculture in Belgium's economy continues to decline. In 1990/91, agriculture contributed only 2 percent to its gross domestic product (GDP). Roughly 2.3 percent of the workforce is engaged in farming.

Belgium has an Atlantic temperate climate and fertile soil. Farmers use intensive production methods on their family-managed holdings to obtain high yields. Average farm size is 15.6 hectares.

Animal production accounts for 66 percent of total agricultural output. Two out of three farmers raise cattle for beef and/or milk production on small-scale, mixed farms, which are spread over the country.

Of the total agricultural output, 70 percent is generated in the northern, Flemish part of the country. There animal production flourishes as a result

of intensive, industrial, and export-oriented hog, poultry, and calf production. Horticultural production, which is also concentrated in Flanders, accounts for another 23 percent of total agricultural production. Apples and pears are the principal fruits grown; endive comprises a high-value export vegetable crop, and large quantities of hothouse lettuce and tomatoes are raised. Ornamental plants, including azaleas and begonias, are another high-value export crop.

Wallonia, in the south, accounts for the other 30 percent of the agricultural output. That region produces two-thirds of the country's cereals and sugar beets, and more than 40 percent of its dairy products, beef, and mutton.

The agricultural situation in Luxembourg is similar to that in Belgium. Agriculture's contribution to GDP in 1991 fell to 2.2 percent. Employment in agriculture, including forestry, declined to 3 percent. There were only 3,280 farms over 2 hectares.

Milk accounts for more than half of the gross value of Luxembourg's agricultural production. Other important commodities in decreasing order of value are beef, wine, pork, and cereals. Luxembourg's largest field crop is corn for silage, but it is mostly consumed on farms as animal feed.

Production trends

Although farm income in Belgium dropped significantly for the second consecutive year in 1991, farm investment continued at a high pace over the past few years in the livestock and horticultural sectors.

More stringent environmental legislation will gradually halt expansion of the intensive animal husbandry in Flanders over the next decade. Until then, hog farmers will take advantage of the transition period to expand production further and to convert their farms to



Belgium at a Glance

Population (1991): 9.9 million

Urban population: 41%

Population growth rate: 0.1%

Per capita income (1990): \$18,452

Land use: Crops 25%, meadows and pastures 20%, forest and woodland 21%, other 34%

Major crops: Sugar beets, cereals, potatoes, fruits, vegetables

Livestock sector: Poultry, hogs, dairy and beef cattle

Leading agricultural exports: Animals and products, grains and preparations, oilseeds, seeds and feed, fats and oils, fruits, vegetables, plants and other horticultural products, sugar

Leading agricultural imports: Animals and products, wheat, corn, grain sorghum, other grains and preparations, soybeans, soybean meal, seed and feeds, fats and oils, fruits and nuts, vegetables, cotton, tobacco

Agricultural imports as a share of total imports: 9.5%

U.S. share of total agricultural imports: 4%

Percent of labor force in agriculture: 2%

Membership in economic or trade organizations: EC, GATT, IBRD, IMF, OECD

Luxembourg at a Glance

Population (1991): 388,000

Urban population: 44%

Population growth rate: 1.1%

Per capita income (1990): \$24,953

Land use: Crops 25%, meadows and pastures, 20%, forest and woodland 21%, other 34%

Major crops: Wine grapes, grains, forages

Livestock sector: Dairy cattle

Leading agricultural exports: Animals and products, wine

Leading agricultural imports: Animals and products, wine

closed production units. The new environmental regulations still allow expansion of the broiler production sector. Although the Belgian White-Blue beef cattle remains one of Belgium's agricultural assets, structural overproduction of beef in the EC will

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Animal and animal food products	3,021	3
Animal nonfood products	473	²
Canned fruits and vegetables	558	1
Corn (maize)	264	²
Cotton	63	13
Fats and oils	435	3
Fruits and nuts	758	1
Oilseeds	1,746	9
Soybeans	259	47
Other food products	1,274	1
Other meals, seeds and feed	1,301	3
Rice	86	28
Tobacco	308	6
Vegetables	678	²
Wheat	376	2
Wood products	1,463	8
All agricultural products³	12,807	4

¹ Values are shown in U.S. dollars at U.S.\$1=33.42 Belgian francs.

² Less than 0.5 percent.

³ Includes products not listed.

likely lead to a contraction of the beef fattening sector.

Horticulture is one of the most rapidly growing segments of Belgian agriculture, led by growing export demand for fresh vegetables. About 55 percent of Belgian produce is exported.

Further crop production expansion will be hampered by the increasing demand for land for building and recreation. Wheat and sugar beets continue to remain profitable.

Dairy and wine production will likely remain Luxembourg's main agricultural assets.

Farm and food policy

Belgium and Luxembourg's agricultural policy is mainly determined by the European Community's (EC) Common Agricultural Policy (CAP). Farmers receive the bulk of their financial support through the EC price support system for commodities. The Belgian and Luxembourg Governments spend relatively small amounts of their budget on agriculture and have not allocated large sums to direct income aids for farmers.

In Belgium, policy officials at the national level are constrained from taking initiatives because of political tension that exists between the Flemish-speaking region in the north, and the French-speaking Walloons in the south.

Belgium's food retailing is dominated by large chains, which import food and products directly, but also use importer/distributors. These, in turn, distribute to smaller retailers in some areas where they don't have coverage. Smaller national and regional chains tend to be supplied by individual importer/distributors while institutional buyers and restaurants rely on importer/distributors and wholesale markets. Belgium and Luxembourg present excellent opportunities for high-value food products. Consumers are both price and quality conscious, with a definite bias toward quality.

Trade trends

Combined trade statistics for Belgium-Luxembourg (BLEU) show an agricultural trade deficit with the world and the United States. Agricultural trade accounts for 10 percent of total trade. Belgium is self-sufficient in many products, but remains a net importer of cereals, oilseeds, and forest products. Belgium is a net exporter of beef, sugar, pork, eggs, and vegetables.

As members of the EC, the greater part of Belgium and Luxembourg's trade is with other EC members, principally with France, the Netherlands, and Germany which together account for two-thirds of total BLEU agricultural trade.

Agricultural imports from non-EC countries account for 30 percent of total imports, while exports to non-EC countries account for 20 percent of total exports. The BLEU market, although small, is an important one for U.S. farm products. The United States normally accounts for 4 to 5 percent of BLEU agricultural imports. Imports of U.S. fruits, vegetables, and forest products showed the greatest increases while imports of soybeans and corn dropped significantly over the past few years.

Trade policy and prospects

Belgian subsidies, marketing arrangements, tariffs, levies, special trade concessions, export subsidies and trade barriers, follow EC rules. Within EC agricultural councils, the Belgian and Luxembourg Governments are close to the French positions on defending the CAP. ■

Bolivia

B

Profile of agriculture

Landlocked Bolivia suffers from the disadvantage of very high transport costs to market its products, both domestically and to foreign buyers. Bolivia is the second poorest country in the Western Hemisphere (after Haiti). About 60 percent of its population is Indian, living on subsistence farms. Roughly 38

percent of the labor force is engaged in agriculture.

Agriculturally, Bolivia is divided into three distinct geographical regions: the western, cold "altiplano" (high plains) where elevations reach 10,000-14,000 feet; the central "yungas" area of semitropical river valleys; and the eastern tropical lowlands.

Bolivia's agricultural powerhouse is its large eastern Santa Cruz region, where each year from 20,000 to 30,000 hectares of dense primal rainforest are cleared. Principal annual crops are feed corn, cotton, soybeans, wheat, and beans. Rice, sunflowers, sugar, fruit, vegetables, cattle, and poultry are also widely grown. Santa Cruz's entrepreneurial farmers are implementing new technologies on their holdings that average 100 hectares in size.

Agriculture accounts for about 21 percent of the gross domestic product, having increased in the 1980's, primarily due to the stagnation of other sectors. However, limited access to credit, costly problems with transportation bottlenecks, and limited infrastructure (i.e., poor electrical, water, and communication services) severely constrain growth of the agricultural sector. National production satisfies approximately 80 percent of internal food demand.

Production trends

Agricultural production recovered well in 1991 from serious drought. The potato remains Bolivia's most important staple crop. Soybeans, Bolivia's second most important crop, have nearly tripled in production over the past 6 years. Expansion is expected to continue, though at a reduced rate. As acreage for soybeans has increased planted area, soybeans' alternate winter crops, sunflowers, beans and wheat (possible because of the high altitude of these valleys), have also expanded.

Following several years of decline, a climb in world sugar prices during the



Bolivia at a Glance

Population (1991): 7.2 million

Urban population: 47%

Population growth rate: 2.4%

Per capita income (1991): \$896

Land use: Crops 3%, meadows and pastures 25%, forest and woodland 52%, other 20%

Major crops: Sugarcane, potatoes, bananas, yucca, soybeans, corn, rice, alfalfa, wheat

Livestock sector: Poultry, sheep, dairy and beef cattle, llamas, alpacas, vicunas, swine

Leading agricultural exports: Lumber, soybeans and soybean products, sugar, Brazil nuts, beef, cotton, hides and skins, coffee, beans

Leading agricultural imports: Wheat, dairy products

Agricultural imports as a share of total imports (1990): 12%

U.S. share of total agricultural imports (1990): 26%

Percent of labor force in agriculture (1989): 38%

Membership in economic or trade organizations: ALADI, FAO, GATT, IADB, IBRD, ICO, IDA, IMF, ISO, IWC, OAS, SELA

past 2 years led to an increase in sugarcane production. Recent lower sugar prices may lead to incomplete harvest of the 1992 crop.

Although rice production dropped sharply in the 1980's, recent consumer demand is driving production back up. Corn is recovering its pre-1985 level highs because of demand from the

Agricultural Production

	1990	1991
	thous. metric tons	
Crop production		
Alfalfa	119.0	138.1
Bananas and plantains	435.1	460.9
Barley	53.0	64.9
Beans	12.3	24.5
Coffee	24.0	25.7
Corn	284.6	328.6
Potatoes	582.3	682.4
Rice	217.2	228.6
Sorghum	30.5	51.3
Soybeans	255.4	343.1
Sugarcane	2,883.7	3,705.3
Tomatoes	47.4	48.3
Wheat	89.6	108.5
Yucca	323.6	364.6

Livestock numbers

	1990	1991
	<i>thous. head¹</i>	
Beef cattle	4,914	5,000
Sheep	8,040	N.A.
Hogs	2,232	N.A.
Poultry	23,854	29,855

Animal product output

	1990	1991
	<i>thous. metric tons</i>	
Beef	142.0	151.8
Chicken meat	40.4	50.5
Eggs ²	366.7	480.0
Sheep	17.8	N.A.
Milk ³	26.7	29.3
Hogs	45.9	N.A.

¹ Estimate.

² Million eggs.

³ Million liters.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Animals, live	1.2	N.A.
Cotton	2.6	N.A.
Dairy products	4.3	N.A.
Fats and oils	3.7	N.A.
Flour, starch products	1.6	N.A.
Fruit, fresh	.6	N.A.
Fruits and vegetables, (processed)	.7	N.A.
Grains	23.7	N.A.
Milled products	25.8	N.A.
Prepared foods	6.7	N.A.
Meat and fish (processed)	.7	N.A.
Seeds	.7	N.A.
Sweets, pastries	2.6	N.A.
Tobacco	2.7	N.A.
Vegetables, fresh	1.5	N.A.
Wool, hair, manes	1.0	N.A.
All agricultural products ²	83.4	26%

¹ Values are in U.S. dollars at U.S.\$1=3.17 bolivianos.

² Includes products not listed.

³ Data not available for country of origin by product.

growing Bolivian poultry sector. Higher corn prices, in part due to the 1991 export of 20,000 metric tons to Peru, motivated farmers to plant an additional 20-30,000 hectares this season.

Wheat production expanded 50 percent in the past 4 years, primarily due to added area planted in Santa Cruz. A continued increase of 25-30 percent is projected for 1992.

Coffee exports fell 50 percent in 1991. Low world prices discouraged harvest and lowered coffee sales, encouraging farmers to turn toward more profitable coca.

Cotton production is taking off again in Bolivia. With 1991 cultivated area

reaching 26,000 hectares and another 17,000 hectares newly seeded, cotton might eventually reach the mid-1970's record 50,000-hectare harvest.

The poultry sector has grown rapidly since 1988, when climbing beef prices made chicken and eggs more attractive to a cost-conscious public. In contrast, cattle, swine, and beef industries have shown marginal growth, although the cattle and swine sectors benefited from price increases.

Farm and food policy

Although the Economic Austerity Policy, begun in 1985, strengthened the overall economy, it has hurt the agricultural sector. In compliance with International Monetary Fund policies, the Government's economic program combines fiscal and monetary restraints with extensive free-market policy. Import tariffs have been consolidated and reduced, and the exchange rate is continually devalued, in line with the inflation rate.

While this austere economic policy has brought down inflation to one of the lowest levels in Latin America, 15 percent annually, farmers have suffered from a lack of credit and fierce import competition from neighboring agricultural powerhouses including Brazil, Argentina, and Chile.

Price controls and quantitative import quotas have been eliminated on all commodities except sugar and wheat flour, both of which require import licenses.

Financial stability and free-market policies are not enough to solve the structural problems that face Bolivian agriculture. The agricultural sector has also suffered from suppression of internal demand, elimination of subsidized credit, increased prices for diesel and gasoline fuels, higher prices for imported fertilizers and other chemical inputs, transportation bottlenecks, and

lack of irrigation facilities. On the other hand, a more realistic exchange rate and an open economy have spurred agricultural exports.

Trade trends

Bolivia is a small but rapidly growing net agricultural exporter, although sales stagnated in 1991. In 1990, agricultural exports were valued at \$278 million versus imports of \$83.4 million. Agricultural exports contributed only 5 percent to the GDP in 1990, but exports have increased dramatically since their low total value of \$27 million in 1984. Much of this increase is the result of a successful, sustained promotion of nontraditional exports.

Since the mid-1980's, exports of Brazil nuts and soybeans/products have ballooned. Wood, cattle, and cotton exports have risen, and high-quality beans have recently found a market niche. Sugar shipments remained low.

Bolivia's primary agricultural imports are wheat and dairy products.

Trade policy and prospects

The 1985 economic policy reforms unified exchange rates and eliminated most quantitative import restrictions. Since then, tariffs have been reduced to 5 percent for all capital goods and 10 percent for all others. A 10-percent tax rebate for nontraditional exports was recently replaced with a drawback system. Under this system, exporters are reimbursed for tariffs charged on the import component of their product. Some sectors claim this policy is responsible for the disappointingly low level of agricultural exports in 1991. Others blame lack of credit, low commodity prices of sugar, coffee, and soybeans, and an increase in Peruvian import tariffs (in violation of the newly established Andean Pact agreements) for the poor performance. ■

Brazil

Profile of agriculture

Brazil, the largest country in Latin America, is endowed with vast agricultural potential. In the past 40 years, Brazil has been transformed from a developing, agriculturally based country into a highly diversified industrialized economy. Today, agriculture accounts for about 11 percent of the country's gross domestic product and employs 10 percent of the labor force in more than 6

million agricultural enterprises throughout the country. Brazil's full agricultural potential is constrained by underdeveloped infrastructure (roads, railroads, storage, and so forth) and poor marketing systems.

Brazil has two distinct, contrasting agricultural areas: one, located in the south central region, has temperate rainfall, the best soils, high technology use, reasonable infrastructure, more educated farmers, and modern seed use, and it produces most of Brazil's food and export crops. The other, located in the northeast and frontier areas (such as the Amazon) lacks well-distributed rainfall and good soils, adequate infrastructure, and sufficient development capital.

Brazil is largely self-sufficient in food production, but erratic agricultural policies and adverse weather have affected productive capacity, and necessitated imports each year.

Crop production accounts for 90 percent of total agricultural output. Brazil is the world's largest producer of sugarcane and coffee, and also an important producer of cocoa, soybeans, corn, cotton, tobacco, wood products, oranges, and frozen concentrated orange juice. The remaining 10 percent of the agricultural economy involves livestock activities, mainly the production of beef, poultry, pork, milk, and eggs.

Production trends

The production outlook for Brazil's agricultural sector is generally positive, despite the country's deep economic recession. Total agricultural output is estimated to grow during the next several years by an average of 4 percent annually.

Trends in production of tropical products are variable in response to market forces. Coffee production is declining; sugarcane output is expected to increase moderately; and cocoa production should remain stagnant.



Brazil at a Glance

Population (1991): 155 million

Urban population: 74%

Population growth rate: 1.8%

Per capita income (1991): \$2,500

Land use: Crops 8%, meadows and pastures 19%, forest and woodland 67%, other 6%

Major crops: Sugarcane, corn, soybeans, manioc, oranges, rice, wheat, dry beans, coffee, cotton, cocoa, tobacco

Livestock sector: Beef and dairy cattle, hogs, poultry

Leading agricultural exports: Coffee, soybeans, frozen concentrated orange juice, meats, sugar, forest products, tobacco, cocoa, hides and skins

Leading agricultural imports: Wheat, rice, meat, dairy products, corn, hides and skins, fresh deciduous fruit, livestock and poultry

Agricultural imports as a share of total imports (1990): 6%

U.S. share of total agricultural imports: 10%

Percentage of labor force in agriculture: 10%

Membership in economic or trade organizations: ABUP, ALADI, GATT, ICAC, ICCO, ICO, IDB, IFAD, IRC, OAS

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Cocoa	0.4	0.4
Coffee	1.9	1.7
Corn	21.8	23.5
Cotton	0.7	0.7
Dry beans	2.2	2.4
Oranges	12.0	12.0
Rice	7.2	9.3
Soybeans	20.3	15.5
Sugarcane	220.0	235.0
Tobacco	0.4	0.3
Wheat	3.2	3.2

	<i>mil. head</i>	
Livestock numbers		
Cattle	130	131
Beef	116	16
Dairy	14	15
Hogs	32.5	33.0
Poultry	80	86
Broilers	16	17
Layers	55	60
Turkeys	9	9

	<i>mil. metric tons</i>	
Animal product output		
Beef and veal	3.4	3.6
Eggs ¹	13.5	13.6
Milk	14.5	13.8
Pork	1.0	1.1
Poultry meat	2.4	2.6

¹ Million dozen.

Grain and feed production is expected to recover substantially after two successive poor harvests in 1990 and 1991. Corn production will lead the recovery, boosted by firm demand from the poultry and swine sectors.

Although orange production should continue to grow, it will also reflect

Value of Agricultural Imports, 1991

	Total imports ¹ \$ mil. ²	U.S. share %
Selected products		
Apples and pears	50	2
Corn	83	20
Dairy products	123	0
Dried fruits and vegetables	30	8
Hides and skins	65	5
Livestock, poultry, and semen	40	57
Meat	230	3
Rice	270	15
Tallow	15	55
Wheat	450	18
Wood products	25	5
All agricultural products ³	2,181	10

¹ Preliminary estimates.

² Estimated value, using partial trade data and monthly exchange rates.

³ Includes products not listed.

vacillations in the world frozen concentrated orange juice market.

Brazilian animal product output will likely continue to turn in the best performance in the sector, led by record poultry production arising from strong domestic and export demand. The dairy sector, after 45 years of Government regulation, is now free of price controls, and should expand during the coming years.

Production of tropical wood products, under severe pressure from world environmentalists, likely will continue to stagnate in response to poor domestic demand.

Farm and food policy

Traditionally, Brazilian agricultural policy was designed to achieve three basic goals: self-sufficiency in food

production; growth in export crop production to generate foreign exchange; and increased production of energy crops. As part of the new Government's goal to move the country toward a market-oriented economy, as well as for budgetary reasons, Brazil has shifted priorities. The Government now attempts to achieve the following objectives: stimulate overall agricultural production based on increased productivity; improve the competitiveness of Brazilian farm products in world markets; increase efforts to preserve the environment; encourage private investment in the sector; liberalize imports of agricultural inputs to reduce production costs; reduce direct Government involvement in marketing of domestically harvested crops; and set specific rules to protect domestic farmers from unfair competition from subsidizing countries.

However, Brazilian Government macroeconomic policies, which have been largely designed to fight high inflation and achieve economic stability, have resulted in lower availability of low-cost credit, periodic controls on farm and food prices, and lower purchasing power for Brazilian consumers. These inflation-fighting policies have, in great part, hindered expected growth in the agricultural sector, resulting in shortfalls of agricultural production and lowered producer income. As a result, periodic imports of rice, dry beans, corn, wheat, dairy, and meat products are required.

The Brazilian Government also influences the marketing of agricultural products through the provision of storage loans and direct government purchases of commodities.

The Government privatized the wheat subsector in 1990 and farmers can now sell directly to millers. Most imported wheat now moves through the private sector. However, the Government is expected to remain as

guarantor of the national wheat supply and to maintain regulatory stocks.

The food marketing system in Brazil is in private hands. Supermarkets are the most important distribution channel for imported high-value products and handle more than 70 percent of total retail food sales. There are about 34,000 stores in operation. Other retail food outlets are traditional small specialty stores, such as butcher shops, bakeries, and farm producer fairs (mostly for fresh fruit and vegetable needs).

Trade trends

Brazil is a net exporter of agricultural products. In 1991, agricultural exports declined to \$8.3 billion, while agricultural imports rose to \$2.1 billion. Agricultural trade usually accounts for only 3 percent of the country's GDP, and represents about 40 percent of the current trade account.

Agricultural exports have been affected by an overvalued Brazilian currency, lack of export financing, and high taxes and port costs.

In the past 2 years, agricultural and food imports grew substantially as a result of production shortfalls, ongoing import liberalization, and a relatively favorable exchange rate policy. The trend in agricultural imports appears downward, except for agricultural inputs, as a result of the new policy of prioritizing agricultural production.

Trade policy and prospects

Although the majority of foreign trade of all commodities is handled by the private sector, virtually all commodities require import licenses from the Government. Brazil will likely continue to import bulk agricultural products only to meet shortages of domestic supplies. The Free Trade Agreement between Argentina, Uruguay, and Paraguay could reduce even further U.S. agricultural exports to Brazil, affecting mostly wheat, dairy, and meat products. ■

Bulgaria

Profile of agriculture

Agriculture is one of the major economic activities in Bulgaria. Agricultural and forestry production make up about 10 percent of the gross domestic product. Between 20 and 25 percent of the labor force works in agriculture. In its effort to move towards a market economy, Bulgaria views agriculture as a priority area for restructuring and development.

About 90 percent of Bulgaria's agricultural area has been organized into socialist agricultural units, but this structure will change drastically in the coming years as private property is

reintroduced. The few existing household private plots resemble gardens more than commercial fields.

Crop production accounts for 46 percent of total agricultural output, led by winter grains, corn, tobacco, and horticultural products. Livestock activities, which make up about 53 percent of agricultural output, are dominated by poultry, swine, cattle, and sheep production. Forest products account for only 1 percent of the value of total agricultural output.

Bulgarian agriculture faces a number of problems. The Government needs to develop an efficient, equitable system of private land ownership where one has not existed for over 40 years. Credit is prohibitively expensive, making investment in agriculture virtually impossible. New equipment is scarce and expensive. Aging farm labor and urban migration, which leaves the countryside void of experienced, enterprising young agriculturalists, are other problems.

Production trends

Overall agricultural production will fall in 1992 and perhaps in 1993 because of the economic crisis and uncertainties arising from anticipated land reforms. The economic crisis manifests its impact on the agricultural sector in a variety of ways: Fuel is scarce, credit rates are high, and imported inputs such as fertilizer and pesticides are not plentiful because of a lack of foreign exchange.

Corn is widely considered the favorite crop, since small private farms can harvest it by hand, and feed it to their own livestock. Corn area should remain constant over the next few years, or perhaps increase.

Both production and demand for livestock products are down. Herd size of swine, sheep, cattle, and poultry on state farms has been greatly reduced mainly because of the increased cost and scarcity of inputs such as compound feeds. Swine production will continue its downward trend. The outlook for cattle



Bulgaria at a Glance

Population: (1991) 8.9 million

Urban population: 68%

Population growth rate: -0.2%

Per capita income: \$5,300

Land use: Crops 37%, meadows and pastures 18%, forest and woodland 35%, other 10%

Major crops: Wheat, horticultural products, barley, corn, sunflower, tobacco

Livestock sector: Poultry, sheep, swine, cattle

Leading agricultural exports: Tobacco, sheep and sheep meat, poultry meat, eggs, fruits and juices, wine

Leading agricultural imports: Soybeans, wheat, cotton, sugar, butter

Agricultural imports as a share of total imports: About 10%

U.S. share of total agricultural imports: 10%

Percent of labor force in agriculture: 20-25%

Membership in economic or trade organizations: CCC, FAO, UNCTAD

Agricultural Production

	1990/91	1991/92 ¹
	<i>thous. metric tons</i>	
Crop production		
Barley	1,390	1,495
Corn	1,220	2,718
Potatoes	430	503
Sunflowerseed	390	423
Tobacco	67	74
Vegetables	1,662	1,334
Wheat	5,290	4,549
Wine grapes	543	644

	1990	1991
	<i>thous. head</i>	
Livestock numbers²		
Cattle	1,482	1,136
Poultry	43,743	27,535
Sheep	7,395	6,651
Swine	4,498	3,974

	<i>thous. metric tons</i>	
Animal product output		
Butter	21.9	21.9
Cheese	148.5	145.3
Eggs ³	2,731	2,471
Total meat	590.7	538.0
Milk ⁴	2,427	2,387

¹ Preliminary data.

² As of Sept. 30.

³ Million eggs.

⁴ Million liters.

and sheep is unclear. About 60 percent of poultry is now in private hands. Free-market pricing of meat has driven up prices, thus decreasing meat demand. Consequently, poultry production should rebound in 1992.

With the disappearance of its former East Bloc markets, the demand for Bulgarian fruit and vegetable processed products has dried up. Bulgarian processed goods fail to meet minimum quality standards in the West. A major task of the fruit and vegetable processing

Value of Agricultural Imports, 1991

	Total imports ¹ \$ mil. ²	U.S. share %
Selected products		
Apples and pears	50	2
Corn	83	20
Dairy products	123	0
Dried fruits and vegetables	30	8
Hides and skins	65	5
Livestock, poultry, & semen	40	57
Meat	230	3
Rice	270	15
Tallow	15	55
Wheat	450	18
Wood products	25	5
All agricultural products³	2,181	10

¹ Preliminary estimates.

² Estimated value, using partial trade data and monthly exchange rates.

³ Includes products not listed.

industry is to upgrade and to develop new markets for its products.

Farm and food policy

Land reform is a priority of the Bulgarian Government. Land reform faces some fundamental problems, particularly in terms of land valuation, surveying, and land and capital redistribution. (Many recipients of land are no longer involved in agriculture. The present land law makes no provision for rental or sale of private plots for the first years of ownership.) Because of these uncertainties, the pace of reform is quite slow. Only 15 percent of an estimated 2 million potential land recipients had registered for land return by the end of 1991. (A provisional land division has been made among members of former state cooperatives for 1992, but no deeds have been issued.) The Government recognizes the shortcomings of the land

law, and amending it is one of the primary tasks in 1992.

Previously the state controlled the agricultural economy through several state monopolies. Bulgaria has taken steps to encourage the planned privatization of state firms by the break-up of these monopolies in 1991. There are now hundreds of state companies in place of a few state monopolies. Privatization is proceeding slowly, with over 90 percent of firms still state owned.

Wheat and feed grain funds set up in 1991 as Government procurement agencies have been ineffective. Prices offered were too low and producers opted to hold products rather than to sell. A commodity exchange was set up in Sofia in 1991.

The removal of state subsidies and liberalization of trade has driven retail prices up and consumption down. A positive effect has been the increase in quantity and quality of food products available on the market. Most retail food sales are through state outlets, usually small, local stores. Open-air markets in all Bulgarian cities have also flourished. Bread, meat, and dairy products usually are sold in state stores specializing in those specific items. Price controls have been imposed on 14 agricultural products, including most meat and dairy products, vegetable oil, sugar, and wheat.

Trade trends

During the first 9 months of 1991 agricultural products accounted for about 23 percent of total Bulgarian exports, up significantly from 14 percent for the first three-quarters of 1990.

Tobacco and cigarette exports are an important part of overall export earnings. These products account for up to 70 percent of agricultural export value.

In the 1980's through 1991, corn, protein meal, and sugar were the primary products imported into Bulgaria. Bulgaria will continue to import protein meal and sugar in 1992

and beyond, but corn production now more than satisfies domestic needs. With the break-up of the large state farms, wheat production will decrease in 1992 and probably in 1993. Traditionally a net wheat exporter, Bulgaria will import over 350,000 metric tons of wheat in 1992.

Large fruit and vegetable processing and wine industries were developed to service East Bloc markets. Many fruit and vegetable processors are closing because of the disintegration of those export markets. The almost universally poor quality of these products was unacceptable in the West. One bright spot is wine, which is of good quality and improving. Exports to the EC, particularly the United Kingdom and the Netherlands, and, to a lesser extent, to the United States, are increasing.

Trade policy and prospects

Currency inconvertibility, hard currency shortages, and Government dominance over trade remain formidable barriers to imports from the West. However, since 1991, mandatory licensing is no longer required except for a limited number of imports and exports. This liberalization is a result of Bulgaria's application to join the General Agreement on Tariffs and Trade (GATT).

A handful of state-run foreign trade enterprises (FTEs) continue to dominate international trade. However, these FTEs are scheduled to be decentralized in the near future and eventually privatized. A few small private agricultural import/export firms started up in 1991 and appear to be doing well.

In the past, four-fifths of Bulgaria's trade was with the Soviet Union and other East European countries, mostly in the framework of formalized annual barter arrangements. The disintegration of the socialist bloc trading system (CEMA) is pushing Bulgaria farther and faster into the wider world of trade. ■

Burma

Profile of agriculture

In Burma, 64 percent of the total workforce is involved in farm production, while agriculture (including forestry and fisheries) accounts for about 50 percent of the country's gross domestic product (GDP). Livestock and fisheries account for between 7 and 8 percent of GDP and forestry is about 1.3 percent.

The average Burmese farm is roughly 5 to 7 acres. Burma's terrain is one of central lowlands ringed by steep, rugged highlands. Hills and mountains in the west descend southwards into thinly populated upland forests. The central lowlands are divided into the north-south draining Irrawaddy, Sittang, and Salween Basins and coastal plains.

Not more than 16 percent of Burma's

mountainous terrain is arable, pasture land is negligible, and nearly half the total area is forested.

The climate is predominantly tropical monsoon. Humid summers are preceded by a hot, dry spell, and followed by a cooler, drier period.

Burma is self-sufficient in food production. The primary crop is rice. Burma is also a significant producer of oilseeds, pulses, corn, sugarcane, wheat, various vegetables, fruits, and meat.

Rice is mainly produced in the southern delta rainfed areas of Irrawaddy, Pegu, Rangoon, Arakan, Mon, and Tenasserim, while the regions of Mandalay and Sagaing also produce rice using some irrigation. The quality of Burmese rice remains low because of antiquated storage, milling, and shipping facilities.

The second most important crop, oilseeds, is produced in the Upper Burma areas of Mandalay, Magway, and Sagaing; and also in the lower Burma areas of Pegu, Irrawaddy, and Rangoon. These areas also produce most of the beans and pulses grown in the country.

Burma has a net sown area of over 8 million hectares with over 1.6 million hectares of inter/multiple cropping, making the gross sown area more than 9.6 million hectares. Of this, over 40 percent is rice area, followed by oilseeds, and pulses and beans in second and third place.

Production trends

Burmese agricultural production revived during 1990/91, thanks to favorable weather conditions and attractive prices that resulted from reforms introduced by the Government.

Rice, Burma's major crop and staple food, increased by 1.5 percent in 1990 to 13.7 million metric tons, the largest crop in a decade. Total oilseeds increased by 8 percent while various beans and pulses increased by over 20 percent.

Burma has considerable potential to increase the production of oilseeds and



Burma at a Glance

Population (1991): 42.1 million

Urban population: 24%

Population growth rate: 2%

Per capita income (1989): \$536

Land use: Crops 16%, meadows and pastures 1%, forest and woodland 49%, other 34%

Major crops: Rice, oilseeds, sugarcane, pulses, corn, wheat

Livestock sector: Fishery products, poultry, cattle, hogs

Leading agricultural exports: Forest products, rice, pulses and beans, oilseeds, corn

Leading agricultural imports: Palm oil, cotton, wheat flour

Agricultural imports as a share of total imports: Negligible

U.S. share of total agricultural imports: N.A.

Percent of labor force in agriculture: 64%

Membership in economic or trade organizations: ADB, ESCAP, GATT, IBRD, IMF

Agricultural Production

	1989	1990
	<i>thous. metric tons</i>	
Crop production		
Corn	194	186
Pulses and beans	347	430
Rice (rough)	13,500	13,700
Sorghum	116	138
Sugarcane	2,008	1,998
Wheat	124	138

	<i>thous. head</i>	
Livestock numbers		
Buffalo	2,020	2,060
Cattle	9,126	9,298
Hogs	2,449	2,243
Poultry	27,789	26,422
Sheep/goats	1,302	1,312

	<i>thous. metric tons</i>	
Animal product output		
Beef	37	46
Duck meat	12	11
Other fowl meat	71	68
Mutton	6	6
Pork	41	38

pulses by planting them as second crops. One limiting factor is the lack of mechanical power to work the land.

Burma also produces legumes and vegetables. Further expansion of production of these crops is also possible, but is at present constrained due to the shortage of fertilizers, fuel, and other important inputs.

The production of some important crops, such as corn, jute, and sugarcane has decreased because of fertilizer and

Value of Agricultural Imports, 1990/91¹

	Total imports ¹ \$ mil. ²	U.S. share %
Selected products		
Cotton	8 ³	100
Palm oil	26 ³	0
All agricultural products	N.A	N.A

¹ April-March fiscal year.

² Values are shown in U.S. dollars at U.S.\$1=6.2 Kyat.

³ Estimated.

fuel shortages. Future production trends will depend on the availability of these key inputs.

Farm and food policy

The Government promotes food self-sufficiency, exporting only the surplus. The Government supports agricultural research and the introduction of new crops, supplies agricultural credit, and subsidizes the sale of limited amounts of fertilizers, insecticides, and quality seeds. Agricultural productivity grew spectacularly under the Government's Whole Township Program, launched in 1977. During the first phase of the program nonprice incentives helped increase yields and production in selected townships; in the second phase, targeted townships received increased supplies of inputs, improved extension and initiation of a crop monitoring system.

With the liberalization of the economy in 1988, farmers were freed of specific Government planting requirements. However, since rice is considered vital to domestic political and economic stability, the Government still maintains some control over its production and sale, including a total monopoly on rice exports. Rice farmers must sell some of

their harvest to the state, though the quota has been cut considerably and the procurement price raised nearly to market levels. Other than the Government-procured rice (which is sold to Government employees at subsidized prices, stockpiled, and exported), the domestic rice trade is completely private. A significant amount of rice is smuggled out across the borders.

The domestic food marketing system consists mainly of open-air markets. Fuel shortages have at times caused transportation problems.

Trade trends

Burma is a net agricultural exporter, with agricultural exports (including fish and livestock and timber products) accounting for over 55 percent of estimated exports during 1991. However, if unofficial trade were included, the percentage would probably be considerably higher. Burma imports a minimal amount of agricultural products, consisting mainly of cotton and palm oil. Increased demand for cotton imports could spur an upward trend, but scarce foreign exchange continues to be a limiting factor. Palm oil imports are expected to remain rather static.

On the export side, teak recorded the highest export earnings in 1990/91, earning over \$133 million, with rice coming in second at \$26 million. Other agricultural exports, including pulses, corn, fish, and forestry products (excluding teak) earned over \$126 million.

Teak replaced rice as the largest export in 1985. For rice, the drop in world prices accompanied by shrinking markets and a smaller volume of sales has reduced export earnings.

Before 1962, Burma was the world's leading rice exporter. While this pre-eminent rank is presently not within reach, rice exports could be increased substantially if investments in inputs

were made. Other promising export crops are pulses, corn, oilseeds, and marine and forest products.

Trade policy and prospects

In 1988, the Burmese Government abandoned the socialist economic system which had been in place since 1962 and introduced an open-market policy.

Government policy is to promote export earnings to obtain foreign exchange. The Government's goals include improvement of rice quality, import substitution, expansion and upgrading of oilseed production, diversification of agricultural exports (with emphasis on pulses and beans), and expanded production of corn for export.

Although the policy change has opened up trade opportunities for private domestic and foreign investors, reform has been slow. Much of the economy remains closed to the private sector.

Import licenses are required for all imported products, and import licenses for products which compete with Burmese production are limited. Other major factors restricting imports are scarce foreign exchange and Burma's cumbersome barter system.

On the export side, the open-market system has allowed private traders to export all commodities except rice and teak. From time to time, other products are banned for export when demand pushes their prices up considerably on the domestic market. The Ministry of Trade also sets floor prices for most export crops. The more liberal trading regime has given a boost to farmers' income and to private traders, but has contributed to a rise in food prices. From 1990 to 1991, the export of pulses and beans increased substantially. ■

Profile of agriculture

Geographically, Canada is the world's second largest country, with climatic conditions that vary from temperate to arctic. Despite its large size, Canada's agricultural output is less than that of many smaller countries. Vast tracts of land are not productive because they lack sufficient frost-free days to sustain crop production. It is, however, a major player in world grain trade.

Agriculture is a small part of the total Canadian economy, accounting for about 3 percent of gross domestic

product (GDP) and 4 percent of the labor force.

Agriculture plays a more prominent role in western Canadian economies. Alberta, Saskatchewan, and Manitoba (western provinces) produce most of the country's grain and oilseed crops. The dominant crop is wheat, followed by barley and canola (rapeseed). This region also produces most of Canada's beef and veal.

In the more heavily populated and industrialized central provinces of Ontario and Quebec, agriculture and related industries are a smaller piece of the provincial economic pie. The supply-managed dairy and poultry sectors are the prominent agricultural industries, although grain and forage crop production play a supportive role. Much of the horticultural crop production and food processing also occur in this region. Of all Canadian provinces, Ontario generates the largest farm cash receipts. Quebec is the largest dairy and dairy products-producing province, the second largest producer of chicken, and the leading producer of pork.

Forestry and commercial fisheries are very important agricultural industries. One in 10 Canadian laborers works either directly or indirectly in Canada's forest industries. Commercial fisheries provide an annual catch of over 1 million tons, approximately 75 percent of which is exported.

Production trends

Abundant early season rains and generally good growing and harvesting conditions on the prairies helped Canadian farmers produce excellent quality 1991 grain and oilseed crops. Wheat, canola, and corn production set all-time records; however, the production of barley, oats, and rye decreased from 1990 levels.

Dairy production continued to decline in 1991, largely because of reduced consumption of butterfat. The result has been a further cutback in the



Canada at a Glance

Population (1991): 26.8 million

Urban population (1991): 73%

Population growth rate: 0.84%

Per capita income (1991): \$19,500

Land use: Crops 5%, meadows and pastures 3%, forest and woodland 35%, other 57%

Major crops: Wheat, barley, corn, canola, soybeans, vegetables

Livestock sector: Poultry, beef and dairy cattle, hogs, sheep

Leading agricultural exports: Wheat, barley, slaughter cattle, pork, canola, wood products

Leading agricultural imports: Fruits and nuts, vegetables, beef, wine, corn, poultry meat, processed food products

Agricultural imports as a share of total imports: 6%

U.S. share of total agricultural imports: 60%

Percent of labor force in agriculture: 4%

Membership in economic or trade organizations: GATT, OECD

national industrial milk production quota. Given changing consumer preferences in favor of low-fat products, small increases in the population, and limited export prospects, the quota will likely continue to be cut back in future years.

According to preliminary figures, pork production in 1991 decreased from 1990 levels. A modest inventory expansion will likely lead to augmented pork production during 1992.

Agricultural Production

	1989/90	1990/91 ¹
	<i>thous. metric tons</i>	
Crop production		
Barley	13.9	12.5
Canola	3.3	4.3
Corn	7.1	7.3
Soybeans	1.3	1.4
Wheat	32.7	32.8

	1990	1991 ¹
	<i>thous. head</i>	
Livestock numbers		
Cattle		
Beef	11,147	11,198
Dairy	1,429	1,410
Hogs	10,370	10,441
Poultry (layers)	21,282	21,000
Sheep	515	541

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	924	879
Butter	97	100
Cheese	250	255
Eggs ³	472	468
Milk	7,975	7,950
Pork	1,133	1,110
Poultry meat	701	725

¹ Preliminary data.

² Aug.-July crop year.

³ Million dozen.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Beef and veal (fresh and frozen)	463	60
Corn	80	99
Fruits and nuts	1,190	58
Poultry meat	69	100
Vegetables and pulses (fresh and frozen)	714	81
Wine	306	10
All agricultural products ²	6,950	60

¹ Values shown are in U.S. dollars at U.S.\$1=\$1.1659 Canadian dollars.

² Includes products not listed. Excludes forest products.

Beef and veal production was expected to be down in 1991 from 1990 levels, but will likely rebound in 1992. The 1991 decrease was primarily because of increasing numbers of slaughter cattle from the prairie provinces being marketed in the United States. Expanding cattle numbers in the United States, and subsequent lowered U.S. demand for Canadian livestock, will likely lead to an increase in beef and veal production during 1992.

Farm and food policy

Canadian agricultural policy goals include maintaining adequate food supplies for domestic needs and exports, supporting farm income, and preserving the family farm. Policy measures in the 1980's and 1990's provided a financial safety net for Canadian farmers, especially for grain and oilseed producers. Policies for sectors that mostly serve the domestic market, notably dairy and

poultry, limit foreign competition through import quotas.

Besides these Federal programs, Canadian Provincial Governments also have considerable power to formulate agricultural policy. Under the Canadian Constitution, agriculture is a shared jurisdiction (Federal and Provincial), and most provinces take an active part in planning and implementing programs for their own agricultural sectors.

Both levels of Government in Canada have established agricultural marketing agencies, with varying amounts of power. The Canadian Wheat Board, perhaps the best known of these organizations, has the sole authority to export western Canadian wheat, barley, and oats. The Board is a major player in world grain trade. It also markets these grains for domestic human consumption.

Other national marketing agencies control the production and marketing of dairy products, shell eggs, chicken and turkey, and broiler hatching eggs, in cooperation with provincial marketing boards. Imports are regulated by quotas and licensing requirements. Surplus dairy products are exported at subsidized prices, financed through producer levies.

Apple producers have proposed the establishment of a national marketing agency for fresh apples. The proposal has won acceptance from the National Farm Products Marketing Council and is expected to be voted in by producers during 1992.

Trade trends

Canada is a major agricultural trading partner in the world community. It exports temperate-zone products and imports horticultural and tropical products for which the production potential in Canada is limited by the relatively harsh climate. Its most important exports include grain, oilseeds, livestock, and forest products. The leading imported commodities and

products are fruits, vegetables, nuts, beef, soybeans and soybean meal, processed food products, sugar and tropical products. Generally, Canada runs a surplus in total volume of agricultural trade with the world. However, the large volume of high-value and value-added imports from the United States typically means that the balance of agricultural trade is positive for the United States. In 1990, the United States provided 60 percent of Canada's agricultural imports and received almost 41 percent of its agricultural exports.

According to U.S. data, the United States ended the year with an agricultural trade surplus of approximately \$1.04 billion with Canada. For the period January to August 1991, preliminary data showed Canada with a surplus of about Canadian \$1.5 billion in agricultural trade with all other countries.

Trade policy and prospects

Canada is highly dependent on trade for agricultural products as well as general merchandise items. It strongly supports elimination of agricultural export subsidies in the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) negotiations. However, it has officially petitioned the GATT for a ruling which would strengthen its powers to limit imports of agricultural commodities under supply management. Commodities of particular interest in Canada that could be affected by liberalized trade regimes are dairy and poultry products.

The U.S.-Canada Free Trade Agreement (FTA), implemented in January 1989, has reduced tariffs on agricultural products from the most-favored-nation status existing before the agreement. All tariffs are to be reduced to zero by 1998. The FTA also provides for a bilateral settlement mechanism for trade disputes. ■

Chile

Profile of agriculture

Chile's gradual conversion to a free-market, export-oriented economy permitted the agricultural and forestry sector to nearly double production since 1980. Today, little Government involvement remains in agriculture. All agricultural trade, both imports and exports, is handled through private businesses, except for an occasional, small, Government school lunch program.

Agriculture, the second largest sector after mining, accounts for 9 percent of the gross domestic product. Nineteen percent of the population is involved in

agriculture.

About half of Chile's 300,000 farms produce wheat. The average farm size is 45 hectares.

Most agricultural production occurs in the Central Valley, stretching from 150 miles north to over 600 miles south of Santiago. Intensity of production varies from zone to zone depending upon soil type and moisture availability. The major tree farm production area is also located within this valley.

Production trends

Crop production is much more important in Chile than livestock production. Cattle production for beef and dairy is still widespread although the competing poultry and pork sectors have grown explosively. The combined consumption of pork and poultry now exceeds the per capita consumption of beef. Low wool prices and the lack of demand for sheep meat for consumption have led to the gradual decline in sheep production.

The fresh fruit sector's successful export business has developed only since the mid-1980's. About 20 to 25 percent of orchards are still immature. As these trees begin to bear fruit, production and exports will continue to expand rapidly for at least the next 4 to 5 years.

After some initial problems with overproduction and low export prices for several popular apple varieties, producers now search for foreign market niches and varieties that will be profitable during the Chilean export season. The Asian (Sand) Pear is one of the most recent types of fruit that earned outstanding profits the very first year it was exported.

Chilcan fruit producers are also searching for new fruits and vegetables to produce and export. Tomato paste exports began 2 or 3 years ago, and possibilities exist for profitability shipping fresh tomatoes to the United States.

Producers are experimenting with



Chile at a Glance

Population (1991 estimate): 13.2 million

Urban population: 79%

Population growth rate: 1.6%

Per capita income: (1991 est.): \$2,030

Land use: Crops 7%, meadows and pastures 16%, forest and woodland 21%, other 56%

Major crops: Sugar beets, wheat, potatoes, corn, apples, table grapes, forest products

Livestock sector: Beef and dairy cattle, poultry, hogs, sheep

Leading agricultural exports: Table grapes, apples, peaches, nectarines, pears, dry beans, wine, plums, seeds, raisins, apple juice, barley malt, wool, prunes

Leading agricultural imports: Sugar, cotton, dry milk, soybean meal, bananas, tea, corn, maté, coffee, wheat, rice

Agricultural imports as a share of total imports: 5%

U.S. share of total agricultural imports: 11%

Percent of labor force in agriculture: 19%

Membership in economic or trade organizations: ALADI, GATT, IDA, IDB, IFAD, IFC, IMF, OAS, SELA, WSG

new fruit types, such as the chirimoza, passion fruit, guava, and mango.

Chile is generally self-sufficient in grain production. Imports are needed in

Agricultural Production

	1990	1991
	thous. metric tons	
Crop production		
Beans	87	117
Fruits, total	2,070	2,270
Apples	690	700
Table grapes	630	650
Other	750	920
Grains, total	2,974	2,856
Corn	823	836
Rice	136	117
Wheat	1,718	1,589
Other	297	314
Oils, total	80	90
Rapeseed	53	58
Sunflower	27	32
Potatoes	829	844
Sugar beets	2,594	2,150
Tobacco	14	15

	<i>thous. metric tons</i>	
Animal product output		
Beef	242	236
Butter	6	7
Cheese	24	28
Eggs ¹	1,526	1,670
Milk, cow	1,380	1,460
Pork	123	127
Chicken	124	134

¹ Million eggs.

Value of Agricultural Imports, 1991

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Coffee	8.4	0
Cotton	38.4	1
Fruits and vegetables	39.2	11
Grains and products		
Corn	13.7	90
Rice	8.1	12
Wheat	8.6	43
Other grains	3.9	10
Livestock and products	30.7	6
Oilseeds and products	67.2	1
Seeds	5.0	52
Sugar and tropical products	55.6	13
Tobacco and products	4.3	0
All agricultural products ²	358.2	11

¹ Values are shown in U.S. dollars at U.S.\$1=321 pesos.

² Includes products not listed.

some years when production is low. However, long-grain rice, durum wheat, and corn will continue to be imported.

Despite a sharp decline in sugar beet area over the past 10 to 15 years, improved technology has permitted annual increases in production. Only the very best farmers who can improve average annual yields are awarded a forward contract for their sugar beet production.

Wood and forest product production, primarily radiata pine with some Eucalyptus, will continue to expand at a rapid rate. A production subsidy exists to provide 75 percent of planting and management costs.

Farm and food policy

The current Government has maintained the price driven free-market policies introduced in the early 1980's. There are no agricultural production subsidies, planting programs, or national

pricing schemes.

In general, the Government is not involved in agricultural production, trade, or food marketing. Nevertheless, a price band policy based on a 5-year moving average of international prices governs the import of sugar, vegetable oil, and wheat. The price bands encourage domestic production at the expense of lower priced imports.

The privately owned food distribution/ marketing system operates quite efficiently. The greatest efficiency and most modern technology is present in the production for export sectors. The older production, distribution and marketing system to supply the domestic market is not quite as efficient, but still well run and organized.

The poultry and pork sectors are highly vertically integrated. Most producers are self-sufficient, from providing their own breeding stock, to slaughtering and distributing meat to retail outlets.

Chile is nearly self-sufficient in food production. Imports occur to meet shortfalls in production where the planted area has been diverted to produce crops for the export market. In addition, imports of products not produced in Chile are also necessary. These include cotton, bananas, pineapples, tea, maté, and coffee.

Trade trends

Chile's growing agricultural exports are nearly four times larger than imports. Fresh and processed fruit exports continue to expand at a rapid rate. These products now account for over \$1.0 billion of Chile's \$1.4 billion total agricultural exports. This trend should continue as new export products emulate the success of the fruit export sector.

The combined value of table grapes and apple exports make up around 40 percent of total yearly agricultural exports. Table grape and apple exports are expected to continue increasing as new plantings begin to bear fruit.

However, their importance in the total export picture is expected to decline somewhat as exports of new fruit varieties, such as kiwi, increase.

Chilean wine exports recently began increasing as domestic vineyards and wineries focused on the higher profits received for exports. The domestic wine market has been plagued with low prices and the use of table grapes for wine production. Chilean per capita wine consumption has been steadily declining as younger adults consume more beer rather than wine. Consequently, wineries are producing more varietal wines for the export market every year and will continue to do so.

Processed fruits and vegetables are also rapidly expanding in export volume and value. The fastest growing products are apple juice concentrate and tomato paste. Modern, efficient processing plants have recently been constructed over the past few years to permit Chile's entry into the export market.

Trade policy and prospects

Chile has a market-oriented economy with a liberal foreign investment policy. It strongly supports the elimination of agricultural export subsidies in the Uruguay Round of the General Agreement on Tariffs and Trade (GATT). Chile has recently signed, or is developing, free trade agreements with Mexico, Venezuela, Colombia, and Bolivia.

Prospects are also good for a future free trade agreement with the United States.

Chile has a blanket 11-percent import tariff, except for expensive luxury goods or commodities governed by the price band, which often carry additional surtaxes. All goods also have an 18-percent value-added tax imposed at the consumer level.

As a member of the Latin American Free Trade Association (ALADI), Chile gives tariff preferences to imports of beef, cotton, soybean and cottonseed meals, and vegetable oil from other ALADI members. ■

China

Profile of agriculture

Chinese agriculture is characterized by highly intensive crop production on small holdings averaging under one-half hectare per farmer. With just over one-fifth of the world's population, but only about a tenth of the world's arable land, China is, nevertheless, nearly self-

sufficient in grain and cotton production (over 95 percent for each). Agriculture, accounting for 32 percent of total national income, is a key sector of the economy. Farmers accounted for 60 percent of the labor force of 553 million (according to 1989 statistics) and 74 percent of China's 1.1 billion people live in rural areas (according to the 1990 Census).

China produces a wide variety of agricultural products under climatic conditions that range from temperate in the north, to tropical in the south and arid in the west. Key agricultural production areas are concentrated in eastern China and the central province of Sichuan.

China is the world's largest producer of rice, pork, cotton, tobacco, and eggs, as well as a leading producer of coarse grains, oilseeds (peanuts, soybeans, and rapeseed), wheat, apples, citrus fruits, and walnuts. Staples are wheat in northern China and rice in central and southern China, but consumers can avail themselves of an increasing array of fresh and processed agricultural products.

Crop production dominates Chinese agriculture, but the still inefficient livestock sector is growing rapidly. To address this change the eighth 5-Year Plan (1991-95) calls for feed production to grow by 7-9 percent annually, although actual growth may have reached as high as 15 percent in 1991. There is further room for growth since per capita meat consumption is only 19 kilograms (25 kilograms in urban areas), 82 percent of which is pork. Although pork currently accounts for over 80 percent of total meat output, poultry meat, eggs, beef, mutton, milk, and aquaculture production have all grown rapidly as the Government looks to stretch scarce grain resources by encouraging the production of animals which are grass-fed or which convert feed more efficiently than swine.

Production trends

China attained increased grain and cotton production over the last 3 years



China at a Glance

Population (1990): 1.13 billion

Urban population: 26%

Population growth rate: 1.4%

Per capita income (1990): \$335

Land use: Crops 10%, meadows and pastures 31%, forest and woodland 14%, other 45%

Major crops: Rice, wheat, corn, sugarcane and sugar beets, soybeans, rapeseed, peanuts, cotton, apples, tobacco, sorghum, mandarin oranges, pears, walnuts

Livestock sector: Poultry—broilers and layers, swine, sheep, cattle (mostly draft, but some dairy and beef), goats, major aquaculture industry

Leading agricultural exports: Canned vegetables and fruits, tea, fresh and frozen shrimp, corn, raw silk, peanuts, cotton, swine, sugar, soybeans, meats

Leading agricultural imports: Wheat, vegetable oils (palm, rapeseed, soybean), cotton, softwood logs, sugar, wool

Agricultural imports as a share of total imports (1990): 10%

U.S. share of total agricultural imports (1990): 15%

Percent of labor force in agriculture (1990): 60%

Membership in economic or trade organizations: Observer status at GATT

through a combination of favorable weather conditions and policies promoting these crops. Nevertheless, China hopes to boost grain production by another 15 percent over the 1990 level by

Agricultural Production

Crop production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Apples	4.3	4.3
Corn	96.8	95.0
Cotton	4.5	5.1
Peanuts	6.4	6.1
Rapeseed	7.0	7.3
Rice	189.3	187.0
Soybeans	11.0	10.1
Sugar beets	14.5	15.0
Sugarcane	57.6	61.0
Tobacco	2.6	2.5
Wheat	98.2	96.0

Livestock numbers

	<i>mil. head</i>	
Cattle	103.0	108.5
Dairy	2.7	2.8
Goats	97.2	102.0
Poultry, layers ²	1,050.0	1,200.0
Sheep	112.8	118.0
Swine	362.4	365.0

Animal product output

	<i>mil. metric tons</i>	
Eggs ²	7.9	8.3
Meat, total	28.4	30.8
Pork	22.8	24.6
Poultry meat ²	3.2	3.4
Beef	1.3	1.5
Mutton and goats	1.1	1.3
Milk, total	4.8	5.1
Cow's milk ³	4.2	4.5

¹ Estimate.

² Poultry layers and eggs include chicken, duck, and quail. Poultry meat includes chicken, duck, quail, turkey, and others.

³ Million liters.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Wheat	2,156	30
Vegetable oils	947	²
Cotton	711	51
Softwood logs	509	44
Sugar	379	²
Wool	146	²
All agricultural products³	5,471	15

¹ China Customs reports trade data in U.S. dollars.

² Less than 0.5%.

³ Includes forest products.

the end of the decade. Cotton production can be expected to achieve near record levels over the next few years as Chinese authorities attempt to provide sufficient raw materials for China's large textile sector.

Ambitious production targets for the livestock, dairy, poultry, and aquatic sectors will necessitate breeding improvements and greater use of protein meals.

Growing demand for higher value products such as fruits have been partially met by a virtual tripling of fruit production during the 1980's in a trend that will slow only moderately in the 1990's.

Tobacco production declined slightly in 1991 as the Government stressed the importance of grain and cotton production to the national economy.

The forestry sector is characterized by expanded plantings of fast-growing softwood species most suitable for paper manufacture, but a gradual depletion of commercially usable timber resources.

Farm and food policy

Although many agricultural products have been freed from state control, commodities considered essential to the

economy or to social stability—such as major grains and cotton—remain subject to partial production quotas and state controls on marketing and distribution. Nevertheless, China's eighth 5-Year Plan seeks to introduce gradual market-oriented reforms. These reforms will eventually eliminate low Government procurement prices and Government-subsidized urban retail grain and edible oil prices.

China's three successive bumper grain harvests have depressed market prices and brought to light significant inadequacies in storage facilities. China's Government is attempting to address these problems by increased purchasing for national grain reserves, setting high procurement prices for selected types of grain, and upgrading its storage facilities.

The greatest advance in food production since the beginning of agricultural reforms in 1978/79 is the provision of an increased variety and supply of vegetables, fruits, and livestock products. These reach rural and urban dwellers mostly through open-air markets. The increased freedom to produce what the market demanded and the growth of specialized households which concentrated on profitable fruit, vegetable, tobacco aquaculture, hog, or poultry production led to rapid increases in output.

The "Food Basket" program has spurred growth in vegetable, meat, egg, and milk production in rural areas surrounding medium-size and large cities. Livestock production in these areas is centered on large state farms with medium- to large-scale semi-modern facilities and specialized households using simpler technology. Plastic-covered greenhouses assure adequate vegetable supply year-round in northern cities.

Efficient distribution is hampered by a poor, although gradually improving, transportation infrastructure.

Trade trends

Through policies that encourage the export of agricultural products, tight control over imports, and policies favoring larger production of grain and cotton, China has maintained a favorable balance of trade in agriculture for several years. In 1990, agricultural sales were valued at \$9.8 billion, versus imports of \$5.5 billion.

Given current policies regarding agricultural trade and production, China may remain a net agricultural exporter for the next several years.

Wheat continues to be China's most important agricultural import, accounting for nearly 40 percent of the value of all agricultural imports.

The United States supplies 30 to 50 percent of China's wheat import needs. As China's import list grows, however, the United States will be provided opportunities to expand the variety of products it markets, thereby creating a more diversified trade situation.

Trade policy and prospects

China's main agricultural goal is self-sufficiency. Imports are mostly limited to a small list of essential food items, or items required to help improve the productivity of Chinese agriculture.

With rising incomes and living standards in urban areas and relatively low per capita consumption, latent demand exists for a wide variety of commodities.

In 1991, the United States initiated a trade access action against China that includes a number of agricultural concerns. These include China's import licensing requirements, high tariffs on selected items, veterinary and phytosanitary standards and testing requirements, and the general lack of information regarding import regulations. Successful resolution of this action could create additional opportunities for U.S. products that currently have little or no presence in the Chinese market. ■

Colombia

Profile of agriculture

Agriculture accounts for more than 20 percent of Colombia's gross domestic product and 30 percent of the labor force. The sector enjoys one of the country's highest growth rates, averaging about 5 percent annually. About half of Colombia's agricultural output comes from modern commercial farms (over 50

hectares each) and the other half from small peasant farms (under 3 hectares each). Approximately 22 percent of cultivated land is irrigated.

With three huge mountain ranges and vast jungles, only about 31 percent of Colombia's land is arable. But the country's diverse climates and topography enable the production of a wide range of crops, many of which are harvested twice annually. Colombia is about 90 percent self-sufficient in food.

Cocoa, sugarcane, melons, coconuts, bananas, plantains, rice, cotton, tobacco, cassava, mangoes, and most of the country's beef cattle are produced in hot regions—from sea level to 3,300 feet. Temperate regions—3,300 to 6,600 feet high—are better suited for coffee, corn, tomatoes, pineapples, oranges, and tangerines. Cold regions—6,600 to 9,900 feet—produce wheat, barley, potatoes, flowers, pears, peaches, dairy cattle, and poultry.

Crops account for about 75 percent of total agricultural output with coffee, bananas, and tropical fruits considered the leading products.

Primary livestock products include beef, poultry meat, eggs, and milk.

Production trends

Colombia's comparative advantage in producing a wide range of agricultural products indicates that output generally will continue to grow. However, growth rates for most commodities are expected to slow for the foreseeable future as farmers react to the Government's new market liberalization policy aimed at reducing farm support programs and lowering import barriers.

Agricultural products with good export potential—coffee, flowers, tropical fruits, sugar, and cocoa—appear to have the brightest future.

Poultry meat production has been growing about 9 percent annually and the outlook is very favorable.

Products like milk, pork, eggs, freshwater fish, and grapes also seem to have



Colombia at a Glance

Population (1991): 34 million

Urban population (1991): 65%

Population growth rate (1991): 1.9%

Per capita income (1991): \$1,520

Land use: Crops 6%, meadows and pastures 29%, forest and woodland 49%, other 16%

Major crops: Plantains, potatoes, yucca, sugarcane, corn, African oil palm fruit, rice, coffee, sorghum, cotton, soybean, yams, flowers, beans, barley, wheat, cocoa, (dried fruit)

Livestock sector: Beef and dairy cattle, hogs, poultry broilers and layers

Leading agricultural exports: Coffee, bananas, cut flowers, sugar, cotton

Leading agricultural imports: Wheat, oilseeds and products, barley, tallow, apples, lentils, wool, dry peas, malting barley

Agricultural imports as a share of total imports (1990): 7%

U.S. share of total agricultural imports (1990): 40%

Percent of labor force in agriculture: 30%

Membership in economic or trade organizations: ALADI, Andean Pact, GATT, OAS

good growth potential as Colombian diets improve from steady rises in living standards.

Farm and food policy

Colombian agriculture falls completely within the private sector. Until recently, the Government promoted a policy of food self-sufficiency and provided a wide range of protection for

Agricultural Production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Crop production		
African oil palm fruit	1,223	1,260
Bananas	1,391	1,413
Coffee ²	800	950
Corn	1,200	1,274
Cotton ²	128	161
Plantains	2,684	2,748
Potatoes	2,400	2,372
Rice, milled	1,181	1,130
Sorghum	777	738
Soybeans ²	232	193
Sugar, raw ²	1,611	1,602
Yucca	1,854	1,966
Yams	174	188

		<i>mil. head</i>	
Livestock numbers			
Cattle		16.2	16.1
Beef		11.2	11.2
Dairy		5.0	5.0
Hogs		2.1	2.1
Poultry			
Broilers		179.2	201.0
Layers		25.3	25.9

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	798	828
Eggs	5,023	5,213
Milk	4,150	4,365
Pork	141	137
Poultry meat	280	294

¹ Estimated.

² Data for marketing years 1989/90 and 1990/91; Oct.-Sept. for coffee and soybeans; and Sept.-Aug. for sugar.

Value of Agricultural Imports, 1991

	Total imports \$ mil. ²	U.S. share %
Selected products		
Apples	17	23
Barley	30	5
Barley malt	10	50
Lentils	15	5
Oilseeds and products	45	20
Soybeans	16	0
Peas	12	10
Tallow	19	100
Wheat	125	48
Wool	15	0
All agricultural products ³	430	30

¹ Estimated.

² Values are shown in U.S. dollars at U.S.\$1=701.5 Colombian pesos (IMF).

³ Includes products not listed.

domestic producers. In 1990, the Government unveiled a market liberalization program (called "Aperture" or economic opening) which began reducing support prices, import licenses, and quotas during 1991. Also in 1991, subsidized interest rates for farmers were eliminated. For 1992, the Government budgeted 434 billion pesos (about \$608 million) to support agriculture, a 24-percent growth in absolute terms but a slight decline in real terms considering the 1991 inflation index (27 percent). During 1991, subsidized interest rates for farmers were eliminated.

In 1991, the Ministry of Agriculture announced a 4-year Agricultural Modernization and Development plan aimed at scaling down production of wheat, barley, black tobacco, and sisal which suffer from high production costs and low yields. The plan also calls for the elimination of production subsidies for sorghum and soybeans. When subsidies

are eliminated, output of sorghum and soybeans should decline moderately, as only the most efficient farmers are expected to continue producing those crops. Other products with a doubtful future because of reduced support programs include beef, sunflowers, sesame, cotton, rice, forest products, and yams.

Trade trends

Agricultural products account for about 40 percent of the country's total exports. For years, Colombian agricultural exports have exceeded agricultural imports by roughly 500 percent.

Colombia's favorable agricultural trade balance is expected to continue but the huge gap could narrow somewhat as Colombian demand for imports improves with anticipated rises in living standards.

Imported products comprise less than 10 percent of per capita food consumption. Popular Colombian imports include wheat, barley (including malt), oats, lentils, dried peas, chickpeas, oilseeds and products, tallow, wool, cotton and some deciduous fruit (especially apples and pears). Recent growth trends have shown much promise for imported high-value products like canned food, cheese, and wine.

Colombia's principal foreign suppliers include Argentina (wheat, soybean oil, and oats); Chile (wine, deciduous fruits, and oats); and Bolivia (soybeans). The European Community and Canada compete with the United States in supplying wheat, barley, pulses, seeds, and livestock genetics.

Exports of U.S. agricultural products to Colombia in 1991 amounted to an estimated \$130 million, including wheat (\$60 million), tallow (\$17 million), seeds, corn, apples, and soybean oil.

Trade policy and prospects

To protect farmers from subsidized foreign competition, the Government adopted a price-band policy for eight basic commodities: wheat, corn, rice, sugar, soybeans, sorghum, barley, and powdered milk, including their products and substitutes. Ceiling and floor prices within the different price bands are calculated on the basis of 5-year average world prices and are revised twice each year. Floor prices resemble minimum guaranteed prices for Colombian farmers. Minimum guaranteed prices are determined by the Ministry of Agriculture using several indicators including world market prices.

Imported commodities having cost-insurance-freight (CIF) prices within the price bands are assessed fixed import duties on an ad-valorem basis. Those imported products with CIF prices below floor prices are assessed a surcharge to bring them within the price band, then the fixed import duty is applied.

As of early 1992, milled rice carried the highest import duty—35 percent. Soybeans, sorghum, corn, wheat, sugar, and powdered milk are assessed a duty of 20 percent; malting barley is charged 15 percent.

Colombia's present price-band system presents a formidable obstacle to a wide range of potential agricultural imports. There are no known plans to revise or eliminate the price-band policy.

Colombia grants tariff concessions to Andean Pact countries as well as to members of ALADI.

The Government supports the export of several agricultural products through rebates on commercial income taxes. However, this practice will be gradually phased out in line with the Government's market liberalization policy. For a few commodities (e.g., cotton) the Government provides a direct export subsidy which makes sales to foreign customers more profitable than domestic sales. ■

Costa Rica

Profile of agriculture

Agriculture is Costa Rica's most important economic sector. Agricultural exports represent more than 60 percent of the country's total, and the sector employs roughly 27 percent of the labor force and contributes 20 percent of gross domestic product. During the past 5 years the agricultural sector has grown faster than the economy as a whole.

Production efficiency varies greatly between crops. Banana and coffee producers are among the most productive in the world, while other sectors such as cocoa and grains achieve very low productivity. The last agricultural census (1984) indicates that 47 percent of the farms in Costa Rica are smaller than 5 hectares. Of the 101,973 farms at the time of the census, 90 percent were owned by individuals, and the rest by corporations and cooperatives.

Costa Rica's most important production areas include the Atlantic (bananas), the Central Valley (coffee, sugar, vegetables, dairy cattle), the northwestern province of Guanacaste (beef cattle, tropical fruits, and grains), the north central area of San Carlos

(coffee, sugar, dairy products, and grains), and the south (coffee, bananas, pineapples, and cattle).

Production trends

Banana production has grown steadily during the past few years. Despite a strong earthquake in early 1991, which affected some of the banana production areas, banana output rose.

Coffee production also rose modestly in 1991. Coffee production is not expected to change significantly in the future as total area planted has remained fairly stable during the last few years. Low international coffee prices and labor shortages during the harvest are the most important problems facing this sector.

Beef production and exports increased in 1991 for the first time since 1987. The sector went through difficult times during the 1980's as a result of high interest rates and large debts for some cattle farmers. Production in 1991 increased due to a higher slaughter rate, but a high number of cows slaughtered may reduce production in 1992. Beef is still the third largest agricultural export product of Costa Rica.

Production of nontraditional crops, targeted for export to the United States, has grown rapidly since 1982. These include pineapples, melons, papayas, coconuts, macadamia nuts, strawberries, yucca, chayotes, ginger, pepper, and citrus. Of the above, pineapples, melons, and yucca are the most important. Other important nontraditional products are flowers, ornamental plants, and foliage.

Cocoa production has declined below levels of the 1980's. The poor genetic material distributed during the 1980's is blamed by producers as the main cause of their problems.

Costa Rica is self-sufficient in some years in rice and beans. The country produces a negligible amount of yellow corn and no wheat or soybeans. White corn production showed a further drop



Costa Rica at a Glance

Population (1991): 3.1 million

Urban population: 49%

Population growth rate: 2.4%

Per capita income (1991 est.): \$1,817

Land use: Crops 13%, meadows and pastures 45%, forest and woodland 34%, other 8%

Major crops: Bananas, sugarcane, rice, coffee, beef, white corn, beans

Livestock sector: Beef and dairy cattle, poultry, swine

Leading agricultural exports: Bananas, coffee, beef, pineapples, sugar, ornamental plants, cut flowers, yucca and other roots and tubers

Leading agricultural imports: Yellow corn, wheat, soybeans, fruits and vegetables

Agricultural imports as a share of total imports: 6-9%

U.S. share of total agricultural imports: 55%

Percent of labor force in agriculture: 27%

Membership in economic or trade organizations: CACM, GATT, IBRD, IDB, IFAD, IFC, IMF, OAS, ODECA

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production¹		
Bananas	1,362	1,472
Beef	85	91
Coffee	147	154
Corn	80	68
Rice	225	194
Sugar	245	265

	<i>thous. head</i>	
Livestock numbers		
Cattle		
Beef	995	990
Dairy	225	228

¹ Crop years are Jan.-Dec. for bananas and beef; Oct.-Sept. for coffee and sugar; July-June for rice; and Aug.-July for corn.

in 1991. Planted area of basic grains is facing strong competition from more profitable nontraditional crops.

Farm and food policy

The Government is not directly involved in agricultural production, but is involved in the marketing of some products, especially wheat, corn, and beans. Since 1990, the Government's

Value of Agricultural Imports, 1991¹

	Total imports \$ mil. ²	U.S. share %
Selected products		
Beans	1.1	9
Candies w/o chocolate	3.7	6
Condensed milk	3.5	0
Corn	26.0	100
Cotton	2.7	40
Dry cereals	4.2	4
Fruits, fresh and preserved	4.5	54
Fruit and vegetable juices	4.5	30
Malt (including roasted)	4.0	0
Ornamental plants	3.3	7
Sauces and condiments	4.7	3
Starch and fecula	3.2	62
Soybeans	18.0	100
Wheat	18.0	100
All agricultural products³	165.0	55

¹ Estimated.

² Values shown in U.S. dollars at U.S.\$1=122.1 colones.

³ Includes products not listed.

role in the marketing of yellow corn has been reduced sharply.

An important goal of the Government has been to maintain self-sufficiency in basic foodstuffs, particularly in rice, beans, white corn, and milk. During 1991, no imports of these products had to be made, but during 1992 it is expected that some rice and possibly beans will have to be imported.

Trade trends

Costa Rica is a significant net exporter of agricultural products. During 1991, Costa Rica exported an estimated \$950 million worth of agricultural products, and imported about \$165 million. Traditional products (bananas, coffee, beef, and sugar) still represent

about 70 percent of exports, although nontraditional products (mostly pineapples, melons, yucca, ornamental plants, flowers, and foliage) have increased their share since the early 1980's.

In the future, strong expansion of banana exports is expected, as the area planted keeps increasing and yields remain high. Export growth could be limited by lack of port capacity. Banana exports in 1991 were valued at \$400 million.

Coffee export value during 1991 increased slightly as compared to 1990, as a result of higher export volume. The outlook for coffee exports during 1992 is uncertain given low international prices.

Beef exports increased substantially both in volume and value during 1991, reaching close to \$60 million, up from \$46 million in 1990. The opening of the Mexican market in 1991 contributed to the higher beef exports, which were previously made almost entirely to the United States.

Pineapple exports grew rapidly throughout the 1980's, but decreased during 1990 and 1991 partly because of insect problems. Exports of ornamental plants, flowers, and foliage have continued to grow and now claim a significant share of total agricultural exports.

Costa Rica has an agricultural trade surplus with the United States, its main agricultural trade partner. In 1991, exports to the U.S. rose 10 percent to about \$440 million, while imports declined slightly to around \$90 million.

Costa Rica's agricultural imports consist mainly of yellow corn, wheat, soybeans, vegetables and fruits, and occasionally rice and black beans. Import volume of wheat, yellow corn, and soybeans has grown over the past few years. Demand has grown especially for yellow corn and soybeans, as poultry production has increased. Imports of wheat declined during 1991 due to higher than normal imports during 1990, which kept stocks at a higher level.

The United States continues to hold a

100-percent share of the Costa Rican market for yellow corn, wheat, and soybeans, which constitute the bulk of Costa Rica's agricultural imports, and a 55 percent share overall. U.S. exports of fresh apples have grown over the past few years.

Trade policy and prospects

In 1992, the Government began liberalizing imports from its Central American neighbors by abolishing import permit requirements. Imports from outside the region, beginning with basic grains, would also be allowed without import licenses, but a price-band system will go into effect for some grains imported from outside Central America. Costa Rica has taken steps towards liberalization with a gradual tariff reduction beginning in April 1992. The maximum tariff is expected to be cut for all products from 40 percent to 20 percent by 1993. Price controls for a number of agricultural products are also expected to be eliminated during 1992.

The Government is also undertaking discussions to reach free trade agreements with the Governments of Mexico, Venezuela, and Chile. A free trade agreement with Mexico could begin in 1992. The Government has signed a framework agreement with the United States to discuss areas of trade concern, trade integration, and free trade agreements.

Costa Rica promotes exports of non-traditional products through the use of CATS (tax credit certificates which provide tax benefits to exporters). However, faced with a difficult fiscal situation, the Government now taxes CATS and their use is expected to decline over time. During 1992 or early 1993, Costa Rica is expected to receive a World Bank loan, which would require further trade-related reforms. ■

Profile of agriculture

Agriculture is the most important sector in the Ivorian economy, contributing 31 percent of the gross domestic product in 1990 (20-22 percent from food crops and 9-10 percent export from cash crops), and providing employment for 53 percent of the population.

Average farm size is about 5 hectares. Major export crops are cocoa, coffee, cotton, rubber, tropical hardwoods, pineapples, bananas, and vegetables.

Côte d'Ivoire is self-sufficient in food crops such as cassava, yams, cocoyams, and corn, but must import rice to

supplement local production. Imports meet all domestic requirements for wheat. The lack of sufficient storage, transportation, and marketing facilities reduces the year-round availability of domestically produced food.

Côte d'Ivoire continues to be the world's leading producer of cocoa and the fourth largest producer of coffee. The drastic fall in export prices for these two commodities has reduced their importance in total export earnings. Côte d'Ivoire remains in a recession because of falling export earnings. However, a restructuring program supported by the International Monetary Fund (IMF) and the World Bank, started in the first quarter of 1990, has begun to stabilize the economy.



Côte d'Ivoire at a Glance

Population (1990): 12.0 million

Urban population: 45%

Population growth rate: 3.4%

Per capita income (1990): \$808

Land use: Crops 13%; meadows and pastures 9%; forest and woodland 26%; other 52%

Major crops: Cocoa, coffee, cotton, rubber, pineapple, bananas, yams, cassava, plantain, paddy rice

Livestock sector: Cattle, hogs, poultry, sheep

Leading agricultural exports: Cocoa, coffee, cotton, rubber, palm oil, pineapple

Leading agricultural imports: Rice, wheat, meat, milk, vegetables, tobacco

Agricultural imports as a share of total imports: 20-25%

U.S. share of total agricultural imports: 4%

Percent of labor force in agriculture: 53%

Membership in economic or trade organizations: ACP, CEAO, ECOWAS, FAO, GATT, IBRD, IMF

Agricultural Production ¹

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Bananas	134	128
Cassava	1,393	1,410
Cocoa	710	785
Cocoyams	282	290
Coffee	284	250
Corn	484	490
Cotton	243	261
Pineapples	200	280
Plantains	1,086	1,100
Rice (paddy)	687	725
Yams	2,528	2,540

	<i>thous. metric tons</i>	
Animal product output		
Beef	16.0	17.0
Pork	6.7	7.0
Poultry meat	19.0	20.0

¹ Years are Jan.-Dec. for all commodities except cotton, coffee, and cocoa, which are Oct.-Sept.

Production trends

Domestic food production rose nearly 4 percent in 1991, as a result of the movement of farm labor and other agricultural resources away from export crops. Favorable rainfall patterns also aided food crop production.

Vegetable production was aided in 1991 by improved technical assistance and favorable market prices. Major products are eggplants, tomatoes, cabbages, okra, pimentos, and shallots.

Total meat production increased in 1991, as a result of improved technical supervision by the SODEPRA, a parastatal agency. Beef is the major meat product, with production showing an upward trend. However, continued imports of subsidized European meat products restrict the expansion of the domestic industry.

Production of export crops increased by approximately 3 percent in 1991. The Government policy to diversify agricultural production has led to increased production of crops such as pineapples,

palm fruits, rubber, tobacco, and cotton.

Bananas, a major export crop, declined in production. Marketing problems with the 1990 crop and unfavorable rainfall also meant coffee output declined by 12 percent in 1991.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Beef	14	0
Beef offals	4	25
Cattle, sheep, and goats	68	0
Corn seeds	1	0
Dairy products	53	0
Horticultural products	35	0
Rice	100	36
Tobacco	17	18
Wheat and flour	52	15
Wine	7	0
All agricultural products²	401	12

¹ Not official data. Values are shown in U.S. dollars at U.S.\$1=272 CFA francs.

² Includes products not listed.

Farm and food policy

The agricultural sector in Côte d'Ivoire is characterized by Government intervention. In 1991, the Government allocated 37 percent of the capital budget to agriculture. While most production is carried out by private producers, the Government has established a number of parastatal enterprises to control various agricultural activities, including producer prices, input prices and distribution, technical assistance, and marketing. These enterprises were designed to be self sufficient, but because of artificially high producer prices, they must rely on Government transfers to cover operating deficits.

The IMF, World Bank, and other international lending institutions which have made large loans to Côte d'Ivoire

are pressing the Government to reduce expenditures. This pressure has led to the partial privatization of the meat sector and discussions on the eventual privatization of the oilseeds sector. Minor liberalizations have taken place in the marketing of coffee and cocoa.

The Government continues to pursue the agricultural policy objectives established in the 1980's, when many primary product prices began to decline on world markets. These policies include the following objectives: To organize producers into cooperative groups to pool their resources in production, marketing, and input procurement, and to improve their credit-worthiness for loan requirements; to expand the diversification of agricultural production; to undertake an intensive reforestation of woodlands, to maintain the ecosystem, and to halt the destruction of the forest; to modernize cultural practices, improve infrastructure, and expand extension services; and to intensify the training of agricultural professionals.

Starting in 1990, the Government added the goal of improving the quality of export products as a way of increasing prices in a time of oversupply of primary commodities on world markets.

Trade trends

Agricultural imports totaled \$430 million in 1989. Major agricultural imports were rice, wheat, live animals, meat products, dairy products, and beverages. U.S. agricultural exports to Côte d'Ivoire in 1989 were \$15.7 million, rising to \$32.8 million in 1990. This increase was the result of both the first-time sale of \$3.2 million worth of U.S.

wheat and the opening of the market for brown rice. U.S. rice sales totaled \$27.4 million in 1990. Other U.S. exports included soybean oil, valued at \$396,000, meat products valued at \$780,000, and milk products valued at \$100,000.

Agricultural exports in 1989 were \$1.8 billion. Major export products were cocoa beans and products, green coffee and products, cotton, rubber, vegetable oil, pineapples, and bananas. The contribution of cocoa and coffee product exports to total export earnings fell from about 50 percent in 1989 to 34 percent in 1990 because of low export prices.

Trade policy and prospects

The import of all bulk agricultural products is controlled by the Government. Consumer prices for staples such as bread are also set by the Government. Import licenses are required for high-quality consumer packaged rice. All low-quality bulk rice is imported directly by the Ministry of Trade. In 1990 and 1991, the Government granted licenses for the importation of limited quantities of brown rice after lengthy negotiations with U.S. representatives.

Wheat imports are strictly controlled through licensing arrangements with the flour mills. Wheat flour imports are tightly controlled. Imports of poultry products have been banned in an attempt to protect the struggling domestic industry. Pressure to liberalize both import and pricing policies exists, but changes, if they occur, will only be marginal. The import taxes and pricing policies for imported agricultural products are a major source of Government revenue, as well as a means of maintaining high prices for domestically produced agricultural products. ■

Czech and Slovak Federal Republic

Profile of agriculture

Agriculture contributes about 17 percent to the Czech and Slovak Federal Republic's national income and employs 12 percent of the labor force.

The crop sector accounts for around 40 percent of total agricultural output. Major crops include wheat, barley, potatoes, sugar beets, forage crops, corn, rapeseed, oats, rye, fruit, vegetables, and sunflowerseed.

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Barley	4,071	3,798
Corn	468	867
Oats	414	343
Potatoes	2,534	2,964
Rye	736	446
Rapeseed	380	426
Sugar beets	5,608	6,050
Wheat	6,707	6,216

	<i>thous. head</i>	
Livestock numbers¹		
Cattle	5,129	4,923
Cows	1,795	1,744
Hogs	7,498	7,090
Sows	493	493
Horses	42	39
Poultry	48,566	49,756
Layers	23,698	23,349
Sheep	1,051	1,030

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal ²	736	728
Butter	157	159
Cheese	152	149
Eggs ³	5,628	5,665
Milk ⁴	6,888	6,722
Pork ²	1,146	1,115
Poultry ²	310	327

¹ As of January 1.

² Live weight.

³ Million eggs.

⁴ Million liters.

The livestock sector chiefly consists of hogs, beef and dairy cattle, and poultry. The country is basically self-sufficient in the production of livestock and livestock products. However, consumption of poultry is quite low. Production efficiency depends on the supply of protein feeds, particularly imported soybean meal.

Former state monopolies still control much of the agricultural production, food processing, and sales of agricultural inputs. Cooperatives or the state operate nearly 95 percent of the agricultural land.

Cooperatives have been the most important segment of agriculture. In 1990, the 1,749 farm cooperatives had an average of 2,488 hectares each. State farms are fewer in number, but larger in size. In 1990, the average size of the 257 state farms was 5,727 hectares.

Private farms that exist are small and are mainly engaged in labor-intensive production activities, such as fruits and vegetables or livestock. However, the country has adopted a land law that allows private ownership of farmland and permits land that was confiscated in 1948 to be returned to its original owners.

The transformation to a market economy will have a major impact on the farm structure over the next few years. One trend already evident is the division of large state and cooperative farms into more manageable units.

Production trends

Gross agricultural production probably declined again in 1991 with the drop coming primarily in the livestock sector. The decline in livestock output was due to a sharp drop in demand for meat and other livestock products which was caused by a large rise in retail prices. Crop production was mixed with some crop yields rebounding from the 1990 drought.

The grain crop fell from the record 1990 level to 11.9 million metric tons in



Czech and Slovak Federal Republic at a Glance

Population (1991): 15.7 million

Urban population: 62%

Population growth rate: 0.3%

Per capita income (1990): N.A

Land use: Crops 41%, meadows and pastures 13%, forest and woodland 37%, other 9%

Major crops: Wheat, barley, potatoes, sugar beets, forage crops, corn, rapeseed, oats, rye, fruit, vegetables, grapes, sunflowerseed

Livestock sector: Hogs, beef and dairy cattle, poultry

Leading agricultural exports: Meat, dairy products, vegetables, alcoholic beverages, wood and wood products, sugar and sugar products

Leading agricultural imports: Cotton, feedstuffs (mainly soybean meal), fruits and nuts, hides and skins, wool, coffee, sugar and honey, alcoholic beverages, rice

Agricultural imports as a share of total imports: 11% (includes forest products)

U.S. share of total agricultural imports: 2%

Percent of labor force in agriculture: 12%

Membership in economic or trade organizations: CCC, ECE, EC (associate member), FAO, GATT, IMF, ISO, UNCTAD

1991. This drop in total grain production was because of both reduced yields and area. Some decline in grain production is anticipated as future planting decisions will be based on profitability and

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Alcoholic beverages	50	N.A
Coffee	77	N.A
Cotton	175	2
Feedstuffs	166	N.A
Fruit and nuts	132	N.A
Hides and skins	123	9
Rice	49	2
Sugar and preparations	58	N.A
Wool and animal hair	101	N.A
All agricultural products ²	1,541	2

¹ Values are shown in U.S. dollars at U.S.\$1=17 CSFR crowns.

² Includes products not listed. (Includes forest products.)
N.A = Not available.

comparative advantage rather than on central planning.

In 1991, oilseed production increased. Output of rapeseed, the most important oilseed, was up 12 percent. Additional expansion will depend on the relative profitability of oilseeds versus other crops and on oilseed crushing capacity.

Sugar beets have been a problem crop with yields being significantly lower than in neighboring countries. The 1991 crop of 6.05 million tons was almost 8 percent higher than in 1990, but it is still more than a million tons below production levels in the mid-1980's.

Livestock production accounts for more than half of total agricultural output. Livestock agriculture continues to experience problems.

The freeing of most livestock product prices resulted in significant rises following years of artificially low prices because of Government controls.

The outlook for the poultry sector is the brightest. Price increases for broilers have been the smallest and demand is relatively strong.

Farm and food policy

The major thrusts of the country's agriculture policy are the privatization of agriculture and the food industry, and the movement to a market economy. The long ingrained policy of food self-sufficiency has been abandoned.

For many years, the Government used subsidies to keep food prices low and stable; however, this practice created huge price distortions. As an example, some people were buying bread for animal feed because it was so inexpensive.

In July 1990, the Government lowered retail food subsidies and in January 1991 another retail price increase took place when prices were freed for all but essential goods, such as flour and milk. The rise in retail prices has curbed consumer demand for many food items including beef, pork, and milk.

While most producer prices have been liberalized, a market regulation fund helps support some producer prices.

Trade trends

The country is a net agricultural importer, with total agricultural purchases in 1990 of \$ 1.5 billion, versus agricultural exports of \$ 0.7 billion.

Leading agricultural imports consist of cotton, feedstuffs, fruits and nuts, hides and skins, wool, coffee, sugar and honey, alcoholic beverages, and rice.

U.S. sales to the Czech and Slovak Republic, valued at \$23 million in 1990, declined to \$21 million in 1991. U.S. shipments in 1991 included cotton (\$15 million), rice (\$1.5 million), livestock products, principally furskins and cattle hides (\$1.4 million), and tobacco (\$900,000).

This low level of U.S. exports reflects the Republic's relative agricultural self-sufficiency, a lack of hard currency, reduced domestic demand, and competition from other suppliers.

The leading agricultural exports

include meat, dairy products, vegetables, alcoholic beverages, wood and wood products, and sugar and sugar products.

U.S. agricultural purchases from the Republic increased from \$12 million in 1990 to \$17 million in 1991. Hops, fruit and vegetable juices, feed ingredients, pork, and beer were the principal products.

Trade policies and prospects

A Czech-Slovak law grants foreign trading rights to most enterprises. However, because of their lack of trade experience and international contacts, many agricultural firms continue to rely on former state trading organizations or their subsidiaries. Many sectors, including the feed, meat, cotton, dried fruit, rice, and tobacco industries, are beginning to explore the possibilities of handling their own trade.

The Government extends most-favored-nation tariff treatment to western suppliers, but does maintain some import duties and protections. Compensatory import rates for a number of agricultural commodities were introduced in January 1992.

Barriers to imports include hard currency shortages, a weak banking system, inexperienced trading companies, and vestiges of Government dominance over foreign trade. Certain livestock products (e.g. poultry meat, hops, and flour), are subject to export restrictions.

The Republic and the United States have implemented a 3-year bilateral trade agreement that extends reciprocal most-favored-nation tariff treatment. In addition, the Czech and Slovak Republic is eligible for participation in U.S. Government export credit guarantee programs and for U.S. funding for projects aimed at creating a viable private agricultural sector. ■

Denmark

Profile of agriculture

Agriculture remains an important component of Denmark's economy, accounting for 9 percent of the country's gross domestic product, and 21 percent of total export earnings. About 5 percent of the total workforce is employed in agriculture.

Danish agricultural production today meets the demands of approximately 15

million people or three times the country's population. For more than 30 years, the agricultural sector has been characterized by a marked trend towards consolidation, mechanization, and specialization. Education, good-quality control systems, a high degree of organization, and cooperative approaches to agricultural production and processing account for Denmark's past successes and form the basis of its present competitiveness.

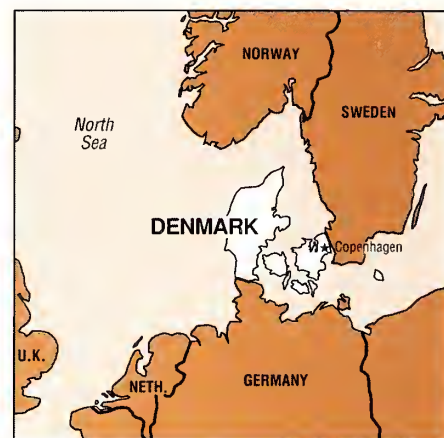
Denmark has an estimated 75,000 farms. Average farm size in 1991 was 36 hectares. Denmark's flat, rolling terrain, mild winters, cool summers, and strong prevailing westerly winds make most of its area productive. Roughly two-thirds of the land is arable. About 55 percent of the land used for crops is devoted to cereals, mostly barley and wheat. Another 23 percent is taken up by roughage and fodder production. Cash crops (mainly potatoes, sugar beets, industrial seeds, and pulses) account for another 20 percent, with the remainder devoted to horticultural crops or fallow.

Approximately 73 percent of average farm income is derived from livestock production, with crop production accounting for the balance. While most fodder is domestically produced, almost 90 percent of the sector's protein requirements for livestock are imported.

Production trends

Agricultural production in Denmark has continued to rise, with total 1991 volume at a level some 45 percent above the early 1970's, and 24 percent above that at the beginning of the 1980's. Between 1970 and 1991, total livestock production increased by almost 35 percent. Following the introduction of European Community (EC) production quotas, milk production peaked in 1983, but subsequently dropped to the level of the early 1970's.

Within the dairy sector, the most important long-term trend has been cutbacks in the volume of milk used for



Denmark at a Glance

Population (1991): 5.1 million

Urban population: 84 %

Population growth rate: Negligible

Per capita income (1990): \$21,964

Land use: Crops 61%, meadows and pastures 6%, forest and woodland 12%, other 21%

Major crops: Cereals, root crops

Livestock sector: Swine, dairy cattle, mink

Leading agricultural exports: Meat, dairy products, fish, furs

Leading agricultural imports: Fruits and vegetables, animal feedstuffs, wood products, wine, tobacco

Agricultural imports as a share of total imports: 9.5%

U.S. share of total agricultural imports: 4%

Percent of labor force in agriculture: 5%

Membership in economic or trade organizations: ADB, AFDB, EC, EMS, FAO, GATT, IBRD, IDA, IMF, OECD, WFC

butter production in favor of cheese. From the early 1970's to 1991, the production of butter decreased by 30 percent, while cheese more than doubled. In the same period, the use of skimmed milk for feed declined from 1.4 million tons to only 100,000 tons. The number of cattle slaughtered continues to decline. EC milk quotas and the consequent reduction in dairy cow numbers resulted in reduced beef and veal production in recent years.

Improved efficiencies in the pork sector—much of it related to pig

Agricultural Production

	1990	1991
	thous. metric tons	
Crop production		
Barley	4,984	4,978
Industrial seed	792	734
Oats and mixed grains	121	127
Pasture and grass/feed	20,411	18,926
Potatoes	1,483	1,557
Pulses	551	400
Root crops for feed	6,827	5,790
Rye	544	388
Sugar beets	3,533	3,039
Wheat	3,953	3,629

	<i>thous. head</i>	
Livestock numbers		
Cattle	2,239	2,215
Beef	87	63
Dairy	753	727
Hogs	9,497	9,740
Mink	2,231	2,093
Poultry, Layers	4,327	4,400
Sheep	100	111

	<i>thous. metric tons</i>	
Animal products output		
Beef and veal	220	227
Butter	92	70
Cheese	95	86
Eggs	82	83
Milk	4,747	4,427
Mink furs ¹	13,500	10,000
Pork	1,214	1,287
Poultry meat	138	135

¹ Thousands.

Value of Agricultural Imports, 1991

	Total imports \$ mil. ²	U.S. share %
Selected products		
Feedstuffs (mainly oilmeals)	554	4
Fruits and vegetables	559	6
Grains and products	230	4
Tobacco and products	94	41
Wine	221	2
All agricultural products³	2,672	4

¹ Estimated.

² Values are shown in U.S. dollars at U.S.\$1=6.40 Danish kroner. Includes commercial and concessional imports.

³ Includes products not listed.

numbers per sow—contributed to a 50-percent increase in pork production between the early 1970's and 1991. Poultry meat production likewise increased by more than one-third, to 135-138 million kgs. In contrast, egg production in 1991 was virtually unchanged from levels at the beginning of the 1970's.

Steady increases in fur production occurred throughout most of the 1970's and 1980's, such that total mink pelt output tripled during the period. Since 1989, mink pelt production has dropped by around 24 percent, standing at only 10 million in 1991.

Winter crop production since 1987 has benefited from generally milder than normal weather with record cereal crops occurring successively in 1989 and 1990. About 60 percent of Denmark's cereal production is used for feed, with the remainder sold to mills, breweries, and the like or sold for export. The beneficial growing conditions contributed to crop output sufficient to allow annual net exports of between 2 and 3 million tons, corresponding to between 25 and 30 percent of the total cereal harvest.

Farm and food policy

Denmark is the only Nordic country that is a member of the EC, which provides considerable financial support (\$1.4 billion in 1991). The EC's Common Agricultural Policy (CAP) determines Denmark's agricultural production policies.

The CAP relies largely on a price support policy to maintain farmers' incomes. Although the method of price support varies somewhat from product to product, certain basic concepts are nearly universal.

Internal prices are maintained in three ways. First, levies and duties imposed on imported commodities which compete directly with EC production are set high enough to insure that those commodities cannot be sold at prices less than the EC support level. Second, intervention buying is used to withdraw excess supplies from the market and strengthen prices. Finally, export subsidies are granted by the EC to allow surpluses to be sold on the world market.

Trade trends

Denmark relies on export outlets for approximately two-thirds of its total agricultural output — and about 70 percent for products such as pork and cheese.

Agricultural products account for about 21 percent of Denmark's total export earnings, a share which has been declining since the early 1970's as industrial production and exports have grown faster than agriculture. Other EC member countries typically take about 60 percent of the country's agricultural exports.

In 1991, Denmark's agricultural exports totaled a record high \$7.8 billion and imports were \$2.7 billion. Only about one-fourth of Denmark's agricultural exports fall into either the bulk/primary or intermediate category of products. The remainder are either processed or high-value products

ultimately destined for the retail/consumer sector.

Major exports include pork, dairy products (mainly cheese and butter), furs, and grains. Pork products alone account for nearly 40 percent of Denmark's total agricultural exports.

Just over 50 percent of agricultural imports are highly processed products destined for the retail trade and another two-thirds are semi-processed or intermediate products (e.g. leaf tobacco, soybean meal) destined for further processing within the country. Imports of prepared and frozen foods, fruits, vegetables, and nuts showed the greatest increase.

During the period 1987 to 1991 the U.S. share of Denmark's agricultural imports decreased from 10 to only 4 percent. U.S. exports to Denmark consist principally of soybeans, leaf tobacco, nuts, dried fruits, wines, pet foods, canned corn and wood products (especially plywood).

Trade policy and prospects

Commodity marketing arrangements within Denmark are subject to the EC's CAP. Common EC duties apply for all imports. The EC single market by the end of 1992 will ease trade among member states, including transfers of imports from third countries.

Price is the most important issue in the Danish grocery/retail market today. Both price and value for money are very important to Danish consumers. Retailers press manufacturers to let their branded goods go into discount programs, thereby securing high quality at low prices. A general trend towards a polarization of expensive branded goods and cheaper, less advertised products has been in evidence among the retail sector. ■

Dominican Republic

Profile of agriculture

The Dominican Republic, the larger of two countries sharing the island of Hispaniola, is endowed with a diverse topography. Several mountain ranges and fertile valleys traverse the northern two-thirds of the island from east to west. The southwestern corner of the country is mostly desert, while the eastern portion is flat and overgrown with subtropical vegetation.

Abundant rainfall across most of the country enables year-round agricultural production with limited amounts of irrigation.

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Beans	732	656
Cassava (yucca)	756	608
Cocoa	57	40
Coffee	11	19
Plantains ¹	277	270
Rice	73	70
Sugar	627	650
Tobacco	98	93

Livestock numbers

	<i>thous. head</i>	
Cattle		
Beef	248	246
Dairy ²	152	152
Hogs	304	308
Poultry		
Broilers	99.4	94.4
Layers	3.2	3.0

Animal product output

	<i>thous. metric tons</i>	
Beef and veal	51	52
Eggs ³	63	64
Pork	13	14
Poultry meat	113	108

¹ Million units.

² Includes dual purpose cattle.

³ Million dozen.

The country's principal crops—sugar, cane, rice, coffee, cocoa, cassava, and plantains—are produced on large farms located primarily in the center of the country and towards the northern and eastern coasts. Other food items, specifically vegetables and beans, are produced throughout the country.

Commercial cattle production is concentrated in the higher quality range-lands of the central and eastern regions. Commercial pork and poultry production is found throughout the country, the majority using modern intensive practices. Beef is the only local meat product currently exported.

Agriculture has diminished in importance in the Dominican economy in recent years, in part because of the rapid growth in the free trade zones and industrial service sectors. In 1990, agriculture accounted for 15 percent of gross domestic product and approximately 50 percent of total merchandise exports.

Approximately 11 percent of the population is still directly involved in agricultural cultivation and production; of the total population of 7 million, 42 percent still live and work in rural areas. Most of the significant quantities of agriculture products produced are exported to generate hard currency. As a result, the Dominican Republic must import large volumes of basic foodstuffs to satisfy domestic requirements.

Production trends

Agricultural production during the first half of 1991 was constrained by a soaring inflation rate, a depreciating currency, and tight credit controls. However, the Government acted to rectify this situation and by the second half, production inputs and credit were in much greater supply, and market prices had stabilized considerably.

Cocoa production recorded higher than expected yields in 1991.



Dominican Republic at a Glance

Population (1991): 7.3 million

Urban population: 58%

Population growth rate: 2.3%

Per capita income (1990): \$944

Land use: Crops 30%, meadows and pastures 43%, forest and woodland 13%, other 14%

Major crops: Coffee, sugar cane, plantains, rice, cassava, cocoa, tobacco

Livestock sector: Beef and dairy cattle, poultry

Leading agricultural exports: Sugar and byproducts, coffee, cocoa, beef, tobacco

Leading agricultural imports: Corn, non-fat dry milk, vegetable oils, wheat, protein meal, rice, tallow, tobacco

Agricultural imports as a share of total imports (1990): 18%

U.S. share of total agricultural imports (1990): 74%

Percent of total population in agriculture (1990): 11%

Membership in economic or trade organizations: CBI, GATT, GSP, IBRD, ICO, IDA, IDB, IFAD, IFC, IMF, IOOC, IRC, ISO, OAS, SELA

Coffee suffered from long-term unfavorable growing conditions, weak market prices, and insufficient production inputs.

Raw sugar production was higher than initially expected in 1991 because of a large carry-over of unharvested acreage, timely spring rains, and an absence of serious problems with capital and labor.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Corn	53.8	100
Dairy products	50.0	3
Pinto beans	32.5	100
Rice	26.5	100
Soybean meal	39.6	10
Soybean oil	13.9	100
Soybean	8.0	100
Tallow and Lard	5.2	100
Wheat	5.2	100
All agricultural products ²	321.4	74

¹ Values are shown in U.S. dollars at U.S.\$1=8.63 RD pesos.

² Includes products not listed above.

Cattle and swine herd reduction programs initiated in 1990 because of unfavorable weather and economic conditions continued into early 1991. Producers opted to minimize their risk exposure by reducing herd size. Producers began to rebuild herds later in the year in the wake of better weather and improved economic conditions.

Poultry production in 1991 declined nearly 3 percent in comparison to the year before. Unable to offset rising production costs in a weakening economy, many producers began marketing broiler and layer flocks in 1990, the results of which carried over into 1991.

Farm and food policy

The Dominican Government is publicly committed to programs of self-sufficiency in basic foods requirements, the enhancement of both the quality and volume of export products, and improvements in national nutrition at affordable prices.

In reality, as a result of limited resources, the Government has targeted specific crop and livestock sectors for credit and extension service assistance. Priority is being given to those sectors having the greatest potential for generating hard currency, including rice (60 percent of total assistance); plantains, cassava, and potatoes (14 percent); coffee, cocoa, and tobacco (11 percent); fruits, legumes, and vegetables (2 percent), and livestock (10 percent).

Attempts by non-Government organizations to sway small producers to shift production to fruits, winter vegetables, and other nontraditional cash crops for domestic or export markets have met with limited success. In the current financial environment, many small farmers are hesitant to start growing crops not on the Government's assistance list. This, in turn, has perpetuated a dependency on imports to offset local food shortages.

Trade trends

The Dominican Republic had a positive trade balance in agricultural products in 1990. Agricultural sales totaled \$376 million versus imports of \$321 million. Agricultural products accounted for 51 percent of all products exported, but only 18 percent of all goods imported.

Sugar and sugar by-products ranked first in principal exports in 1990, generating revenues of \$174 million on a volume of 398,000 metric tons. However, exports for the 1990/91 quota year declined 9 percent compared to the year before, as a result of prolonged drought, limited resources, and inefficient management.

Increases in the export of coffee (25 percent) and cocoa (30 percent) were more than offset by lower world prices, which resulted from the collapse of the international trade agreements governing the two commodities. The total trade value of both coffee and cocoa in

1990 was roughly the same as in 1989.

Beef exports, principally to the United States under the U.S. Meat Import Program, totaled some \$30 million in 1990. In recent years, beef production and exports have grown in response to a growing tourism industry and the U.S. meat import program.

The Dominican Republic's primary imports in 1990 consisted of corn, non-fat dry milk, wheat, vegetable oil, protein meal, rice, and tallow.

Corn imports rebounded in 1990 principally as a result of strong demand in the poultry industry. Imports rose 18 percent between 1985 and 1990 in response to a 24-percent rise in domestic consumption during that period.

Imports of wheat, vegetable oil, rice, and tallow increased marginally in 1990 even though the economy was undergoing a major recession. The increases reflected the positive growth trends of each commodity since 1986. Protein meal trade has remained static since 1985. This is, in part, due to the development of the domestic crushing industry.

Trade policy and prospects

The Dominican Republic must continue to import basic food products to meet domestic demand. In December 1990 a new tariff regime, implemented by presidential decree, removed nearly all import restrictions and lowered the basic tariff rate on imports to between 5 and 35 percent of the free-on-board (FOB) value.

Since 1984, the Dominican Republic has qualified for trade benefits from the United States under the Caribbean Basin Initiative (CBI). The CBI seeks to support economic growth and expand private sector opportunities in the Caribbean region through free-trade arrangements that allows duty-free access to the U.S. market for most products produced in the region. ■

Ecuador

Profile of agriculture

Ecuador's agricultural sector has been growing faster than the overall economy. In 1991, agriculture accounted for 18 percent of the country's gross domestic product (GDP). The Ecuadorean agriculture sector employs 35 percent of the labor force, and accounts for over 25 percent of the value of exports.

The livestock sector is the most

Agricultural Production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Crop production		
Bananas	3,054	3,500
Cassava (yuca)	34	30
Cocoa	96	90
Coffee	134	128
Corn, soft and hard	465	615
Palm oil (crude)	120	126
Potatoes	368	367
Rice (paddy)	840	840
Soybeans	166	168
Sugarcane	3,256	3,400

Livestock numbers

	<i>thous. head</i>	
Cattle		
Dairy	2,950	2,900
Beef		
(and dual purpose)	1,250	1,250
Hogs	2,100	2,125
Poultry	56,000	56,200
Sheep	1,300	1,250

Animal product output

	<i>thous. metric tons</i>	
Beef	100,000	110,000
Eggs	45,300	48,000
Lamb and mutton	7,000	8,500
Milk ²	1,380	1,460
Pork	53,000	55,000
Poultry	60,400	62,000
Sheep	1,300	1,250

¹ Estimated.

² Million liters.

dynamic. During the past 3 years, its growth has surpassed GDP growth. Ecuador is self-sufficient in meat and milk production. The per capita consumption of these products, however, is low compared to the recommended standard. The poultry sector doubled from 2.7 million to 5.5 million birds during the past decade.

Average productivity is relatively low, both for land and labor, in large part because modern technologies and inputs are seldom used. The small size of farms is another key constraint on productivity. In the coastal region, food staple products are produced on plots under 10 hectares in size. Seventy-seven percent of the producers own 11 percent of the land, mainly in the mountainous Sierra region, which produces basic products for domestic consumption. African palm oil cultivation is one exception, as it is produced on larger farms.

Both the coastal plain and the cooler, mountainous Sierra region are rich agricultural areas. The eastern Amazon basin produces forest products and some coffee. The Galapagos Islands, 600 miles off the coast of the Ecuadorean mainland, have virtually no agricultural production and are an ecological preserve famous for flora and fauna.

Coffee, cocoa beans, feed corn, and rice are the principal crops of the coastal region; potatoes and soft "choclo" corn are principal crops of the mountain region. Beef, dairy, and poultry production are the main livestock enterprises.

Production trends

Ecuador has been blessed with abundant land resources and has perhaps the best agricultural base of any Andean country for producing rice, hard corn, and vegetable oils. Most increases in agricultural production during the past decade have been due to the expansion of land under cultivation, and increased use of modern technology, including



Ecuador at a Glance

Population (1991): 10.5 million

Urban population: 55%

Population growth rate: 2.8%

Per capita income: \$ 1,015

Land use: Crops 9%, meadows and pastures 17%, forest and woodland 51%, other 23%

Major crops: Bananas, sugarcane, rice, soft and hard corn, potatoes, soy beans, cassava, coffee, African palm oil, cocoa

Livestock sector: Beef and dairy cattle, shrimp, poultry—broilers and layers

Leading agricultural exports: Bananas, pond-raised shrimp, coffee, cocoa

Leading agricultural imports: Wheat, soybean oil, tallow and grease, flavorings, cotton

Agricultural imports as a share of total imports: 7-9%

U.S. share of total agricultural imports: 85%

Percent of labor force in agriculture: 35%

Membership in economic or trade organizations: ALADI, Andean Pact, ICCO, ICO, IDB, IMF, ISO, IWC, OPEC, SELA, UNCTAD

expansion of irrigation and leveling and use of better quality land.

The increase in cropland was accompanied by a moderate increase in yields, especially for coastal crops such as bananas, African palm oil, soybeans, and hard corn. Average yields of cotton, cocoa, and rice also rose.

Livestock production, which grew even more rapidly than crops in the past

Value of Agricultural Imports, 1991

	Total imports ¹ \$ thous. ²	U.S. share %
Selected products		
Cotton	2,335	67
Flavorings	2,625	43
Modified milks	182	10
Soybean oil	11,178	58
Tallow	3,963	100
Wheat	39,970	98
Wines	38	1
All agricultural products³	73,000	85

¹ Available data January-October 1991.

² Values are shown in U.S. dollars at U.S.\$1=1,129.30 sucres.

³ Includes products not listed. Includes forest products.

decade, now claims 33 percent of total agricultural value and equals the value generated by traditional export crops (bananas, coffee, cocoa).

Commercial fishing also expanded rapidly, especially of pond-raised shrimp, which has become a major export item. Shrimp are produced on 80,000 hectares along the coast.

Farm and food policy

The Ecuadorean Government is committed to self-sufficiency in basic foods, and uses price incentives to encourage production.

In an attempt to provide incentives to the agricultural sector, the Government has liberalized prices of several products such as cooking oils and wheat flour.

To improve marketing efficiency, the Government will likely privatize ENAC, its public board that markets the main staple food crops and protects growers from gouging by middlemen. ENAC also provides rice to consumers at low prices.

The Government maintains adequate food supplies through imports of the mainstay foods such as wheat, corn for feed, vegetables, and crude oils.

Trade trends

Ecuador is a net agricultural exporter. In 1991, Ecuador's agricultural exports are estimated to have been \$1.3 billion (including wood products and pond-raised shrimp) versus imports of \$73 million (data available from January to October). The country is a major exporter of bananas, shrimp, coffee, and cocoa. Banana exports have nearly doubled from \$314 million to \$622 million in 1990 and 1991, respectively. Shrimp revenues have increased from \$233 to \$409 million for the same period.

Revenues for cocoa, coffee beans, and coffee products have decreased considerably due to a dramatic fall in world prices. Nontraditional agricultural exports, such as cut flowers, strawberries, asparagus, and other fresh fruits and vegetables, appear to have potential markets, especially in the United States and Europe.

Over 62 percent of Ecuador's agricultural exports are purchased by the United States. The United States takes 58 percent of Ecuador's banana exports, 75 percent of its shrimp exports, 47 percent of its coffee exports, and 65 percent of its cocoa beans and cocoa products exports. Potential exists for larger exports of nontraditional exports such as cut flowers and fresh fruits.

Ecuador's most important agricultural imports are wheat, unrefined vegetable oils, barley, cotton, tallow, and agricultural consumer goods.

Trade policy and prospects

Ecuador imports basic food products such as wheat and vegetable oils to meet internal demand. Wheat imports, though no longer purchased through official tender, are subject to import

quotas tied to off-take of the domestic wheat crop. Imports of flour may be allowed as a counterpart of price liberalization and to increase efficiency. Crude vegetable oils, including soybean oil, are free of all importation restrictions. Wheat imports will increase to meet growing domestic demand. Imports of hard corn for feed are virtually banned due to domestic political pressure from farmers. Sorghum imports are allowed as a substitute.

Ecuador had agreed to fully enter the Andean Pact Free Trade Zone in July 1992. It did not do so because of a number of complications. Nonetheless, products from its Andean neighbors may enter at reduced tariff rates, and Ecuador may export duty-free to those countries that have eliminated their tariffs within the Andean Pact.

The Andean Free Trade Zone, if it comes to fruition, should stimulate Ecuador's agricultural exports to other Pact members, especially corn, rice, and African palm oil.

The Government will probably establish a price-band system, with a base price to encourage production and a ceiling price to protect consumers. Such a system would link domestic prices to world market prices and might involve liberalization of imports of basic agricultural products.

Ecuador offers great possibilities for U.S. exporters of wheat and oils in order to meet regional demand. The poultry sector probably will demand more inputs for its feed formulation including increased imports of corn, fish meal, and sorghum. ■

Egypt

Profile of agriculture

Agriculture is the largest employer in Egypt and a major contributor to the gross domestic production. About one-third of Egypt's labor force is engaged directly in agriculture and many others are engaged in trading or processing agricultural commodities.

All but a small part of Egyptian agricultural production occurs on some

2.5 million hectares of land, mainly located in the Delta and along the Nile Valley. With a large number of farmers and limited land, farms are small, averaging about a hectare in size. Although the Government plays a significant role in agriculture, most farmland is in private hands.

The combination of water from the Nile River, fertile soil, and a mild climate makes Egyptian agriculture one of the most productive agricultural systems in the world. Almost all crops are irrigated. Two or three crop rotations per year are possible on the same piece of land.

The major crops include cotton, rice, and corn in the summer, and wheat, berseem clover, and beans in the winter. Sugarcane occupies about half of the arable land in Southern Egypt. Citrus and vegetables are important crops in the Delta and reclaimed desert lands.

Production trends

Recent reforms, including the decontrol of the production and marketing of many crops and decreased subsidization of inputs, have made agriculture one of the most liberalized and productive sectors of the Egyptian economy. Improved production incentives, reduced governmental market intervention, and increased use of high-yielding seed varieties have resulted in significant increases in the production of wheat, rice, and corn.

Paddy rice production in 1991 reached a new record of 32 million metric tons.

Production of cotton—one of the two remaining controlled crops—remains problematic due largely to the lack of adequate incentives. Cotton (lint) production of 300,000 metric tons was unchanged from 1990.

Farm and food policy

Government regulation of the agricultural sector and influence on production through the establishment of area quotas and procurement prices is diminishing. Since 1986, the Egyptian



Egypt at a Glance

Population (1991): 54.5 million

Urban population: 45%

Population growth rate: 2.3%

Per capita income (1991 est.): \$600

Land use: Crops 5%, meadows and pastures 0%, forest and woodland 0%, other 95%

Major crops: Corn, citrus, tomatoes, rice, potatoes, wheat, sugarcane, cotton

Livestock sector: Poultry, dairy cattle, sheep, goats, buffalo, donkeys

Leading agricultural exports: Cotton, citrus fruits, potatoes

Leading agricultural imports: Wheat, forest products, vegetable oils, corn, beef, wheat flour, dairy, sugar

Agricultural imports as a share of total imports: 45%

U.S. share of total agricultural imports: 23%

Percent of labor force in agriculture: 32%

Membership in economic or trade organizations: GATT

Government has taken many steps to liberalize agriculture, including decontrol of crop production and marketing, and decreased subsidization of inputs. Today, only cotton and sugarcane production are controlled by the Government.

About 90 percent of Egypt's population participates in the food ration system and is eligible to receive quotas of subsidized sugar and vegetable oil. Rice and tea are available through the ration system but are no longer subsidized. By 1993, only sugar and vegetable oil will still be offered through the

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production ¹		
Corn	4.6	4.7
Oranges	1.6	1.6
Potatoes	1.6	1.7
Rice (paddy)	2.8	3.2
Sugar	1.0	1.0
Tomatoes	4.2	4.3
Wheat	4.3	4.5

	<i>thous. head</i>	
Livestock numbers		
Dairy cattle	6,385	6,408
Goats	3,450	3,520
Poultry		
Broilers	185,000	200,000
Layers	60,000	60,000
Turkeys	1,310	1,350
Sheep	3,534	3,554

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	408	420
Butter	3	3
Cheese	310	290
Eggs ²	3,200	2,950
Milk ³		
Cow's	1,060	1,140
Other	990	1,000
Mutton, lamb and goat meat	81	82
Poultry meat	235	225

¹ Crop years vary by commodity.

² Million eggs.

³ Million liters.

Value of Agricultural Imports, 1990¹

	Total imports \$ mil. ²	U.S. share %
Selected products		
Beef and products	210	6
Corn	247	93
Cotton	130	100
Dairy	205	-
Feedstuffs	65	86
Forest products	625	5
Poultry	2	-
Sugar	196	2
Tea, coffee, spices	290	9
Tobacco	72	-
Wheat	855	29
Wheat flour	208	42
Vegetable oils	279	2
All agricultural products²	3,704	23

¹ Estimated from mixed data sources.

² Includes products not listed.

ration-card system. Other important commodities, including bread, flour, and meat, are subsidized but not rationed.

Trade trends

Egypt's agricultural trade balance has turned negative as its population growth rate has outstripped the rate of increase in agricultural productivity. Production and distribution inefficiencies have contributed to reliance on food imports.

Although Egypt exports surplus production of fruits and vegetables, it depends heavily on imports for wheat, feed grains, and forestry products.

In 1991, corn imports were privatized. Although foreign exchange was available in the market with the Government's unification of the exchange rate, the depreciated Egyptian Pound diminished private sector corn imports.

Imports of cotton in 1990 almost doubled. This increase was due to a shortage in local production and the increasing demand of the local mills for

the cheaper U.S. short staple varieties. However, it does not appear that Egypt's imports of cotton in 1991 reached 1990's level.

Egypt relies heavily on imported vegetable oil to meet domestic consumption needs. U.S. assistance programs help make U.S. vegetable oils price-competitive in this important market. Lower priced palm stearin has displaced over two-thirds of the U.S. tallow trade with Egypt over the past 2 years.

Egypt imports about one-quarter of its beef requirements. A 1990 Government suspension of import licenses for beef continues in effect, to protect domestic producers. Still, beef for further processing can be imported and a significant quantity is sold for direct consumption. Poultry imports have been restricted since 1988.

Demand for forest products continues to grow. Prospects for the United States to gain an increasing share of the Egyptian market should improve. Since early 1991 low-priced Scandinavian softwood has flooded the market, but U.S. southern yellow pine, in particular, should regain its competitiveness by mid-1992. U.S. hardwood species like oak and poplar are marketable if promoted consistently at prices competitive with Romanian or Yugoslavian beechwood.

Egypt's exports of cotton decreased to 32,000 metric tons in 1990. Exports declined further in 1991 as a result of the Soviet market's closure. Depressed production, increased demand by local mills for cotton due to an ever-increasing population, an announcement of higher export prices, and a delay in announcing these price rises (late November) have contributed to a reduction in confidence in Egypt as a reliable cotton supplier.

Fresh orange exports increased to a record level of 260,000 metric tons in 1990/91 marketing year. However, it is expected that 1991/92 marketing year exports will be reduced due to the loss of the Soviet market which formerly

absorbed about 40 percent of Egypt's exports for fresh oranges.

After rising sharply in 1991, rice exports are expected to increase further during 1992 because of a continued increase in supply. Growing potato production has pushed up exports, which reached approximately 220,000 metric tons in 1991.

Trade policy and prospects

Egypt imports over 50 percent of the food needed to supply its rapidly growing population. The Government has begun to privatize its economy. Nevertheless, the importation of a number of commodities, notably beef, poultry, fruits and vegetables, is effectively banned to conserve scarce foreign exchange and protect domestic farm production.

The private sector, increasingly encouraged by the Government, is now the major importer of many important agricultural commodities such as dairy products, forestry products, and feed grains. In 1990, the private sector was licensed to import wheat flour on a limited basis for the first time. In 1992, wheat flour importation is expected to be handled almost entirely by private trade. However, the Government remains the major importer of most strategic commodities, including wheat, vegetable oils, and cotton.

The United States supplies about one-quarter of Egypt's agricultural imports. The European Community and Australia are major competitors in the Egyptian market.

Although the Egyptian Government has traditionally preferred credit and long-term supply agreements for agricultural trade, its recent IMF agreement has restricted use of credit. Instead, most of Egypt's import purchases during the latter half of 1991 were settled by cash payments obtained from a combination of debt forgiveness and Egypt's agreement with the IMF. ■

El Salvador

Profile of agriculture

El Salvador is the smallest Central American country and the only one without a coastline on the Caribbean Sea.

Agriculture contributes 25 percent to the gross domestic product and employs 39 percent of the labor force. Coffee is El Salvador's most important crop; it is a major source of employment and Government revenue. Historically, coffee is responsible for 50 to 70 percent of the country's foreign exchange earnings, depending on world prices. Other primary agricultural products include sugarcane, corn, rice, beans, and sorghum.

During the past decade, the military conflict in El Salvador has caused sharp declines in the production of most crops because anti-Government guerrillas attack agriculture as a means of sabotaging the economy. A United Nations-sponsored peace accord was signed in January 1992. Provisions of this agree-

ment will be implemented during the year and will lead to reconstruction efforts in conflict areas.

Salvadorans depend on basic grains, especially corn and wheat, as staples in their diets. Wheat is not produced in El Salvador but is almost exclusively imported from the United States. White corn is produced throughout the country.

Production trends

Coffee production has recently stagnated due to inclement weather conditions the past two growing seasons and depressed international prices. Unless prices rebound, producers will continue to reduce variable production costs, which will adversely affect yields and future production.

The production of basic grains (corn, rice, and sorghum) has not kept pace with domestic demand. Recently the harvest has been hurt by drought.

Sugarcane production grew robustly in recent years in response to relatively high sugar prices, large U.S. sugar tariff-rate quotas, and liberalization of the local sugar industry. However, sugar production will likely stagnate over the near term at about the current production level of 250,000 metric tons. Prices have moderated and export opportunities to the United States have diminished.

During the past decade, the cotton industry has been reduced to only a remnant of its past importance. Due to a combination of low producer prices, civil war, increased production costs, and competition from more suitable crops, El Salvador has been transformed from an exporter of cotton in 1980 to an importer today.

Nontraditional export crops such as shrimp, melons, and sesame seed have gained importance over the past several years as both production and exports have increased. This trend should



El Salvador at a Glance

Population (1991): 5.4 million

Urban population: 44%

Population growth rate: 2%

Per capita income (1991): \$1,111

Land use: Crops 35%, meadows and pastures 29%, forest and woodland 6%, other 30%

Major crops: Coffee, sugarcane, corn, rice, beans, sorghum

Livestock sector: Poultry, beef and dairy cattle, fish and products

Leading agricultural exports: Coffee, sugar, shrimp

Leading agricultural imports: Wheat, vegetables, tallow, protein meal, cotton

Agricultural imports as a share of total imports: 10%

U.S. share of total agricultural imports: 72%

Percent of labor force in agriculture: 39%

Membership in economic or trade organizations: CACM, FAO, GATT, IBRD, ICO, IDB, IMF, ISO, OAS, SELA, UNCTAD

continue over the near term as El Salvador tries to diversify its agricultural base.

The poultry industry in El Salvador continues to grow and is playing an increasingly important role in the national economy. It is also the primary impetus behind the recent growth in imports of soybean meal and yellow corn. Poultry meat has become a more important source of protein in the Salvadoran diet.

Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production ¹		
Coffee ²	2,787	2,402
Corn	582	596
Cotton	6	5
Rice, milled	42	40
Sorghum	148	159
Sugarcane	211	270
Tobacco ³	680	727

	1990	1991
	<i>thous. head</i>	
Livestock numbers		
Cattle		
Beef	1,119	1,223
Dairy	293	298

¹ Production years are July-June for corn, rice, and sorghum; Oct.-Sept. for coffee; Aug.-July for cotton; Nov.-Oct. for sugar; and Jan.-Dec. for tobacco.

² Thousand 60-kilogram bags.

³ Metric tons.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Cotton	9.2	42
Protein meal	11.8	85
Tallow	16.7	100
Vegetable oil	22.4	42
Wheat	27.2	100
All agricultural products²	131.3	72

¹ Values are shown in U.S. dollars at U.S.\$1=7.60 colones. Includes commercial and concessional imports.

² Includes products not listed.

Calf production and cattle herd size are slowly rebounding from more than a decade of decline caused principally by the civil war. Growth is moderate at about 3 percent annually. Although production is increasing, the cattle industry continues to be plagued by poor genetics and a high incidence of disease.

Farm and food policy

During the 1980's, the Government focused on agrarian reform; it created cooperatives from 473 farms of more than 500 hectares each and provided extension and financial assistance to the newly created cooperatives.

Currently, the Government is implementing a rigorous structural adjustment program. Price controls have been eliminated on 226 (mostly agricultural) products, tariffs compressed to a range of 5 to 35 percent, and the tax system reformed.

Export taxes for shrimp, sugar, and coffee have been reduced, and special tax schemes that benefited the poultry, livestock, and fishing industries have been eliminated. Government marketing monopolies for sugar and coffee

have been dismantled, and the local currency has been devalued and stabilized which stimulates investment and exports.

To encourage basic grain production, the Salvadoran Government has removed internal price controls on those products and has adopted a variable import levy for corn and rice. Licensing requirements are no longer used to limit basic grain imports.

Trade trends

El Salvador is a net exporter of agricultural products, with sales totaling \$327 million in 1990 versus imports of \$131 million.

Agricultural exports contribute significantly to El Salvador's gross national product. In 1990, they represented more than 56 percent of El Salvador's total exports.

El Salvador's most important agricultural exports include coffee, sugar, and shrimp. El Salvador's agricultural export values have deteriorated sharply the past several years. The drastic decrease of coffee prices after the suspension of International Coffee Agreement (ICA) quotas continues seriously to affect coffee export values. In 1990, coffee export earnings were less than half the 1986 level.

The performance of the sugar and shrimp sectors is not much better. Export earnings from both sectors in 1990 remained below levels obtained in 1986. Although much less important to the Salvadoran economy, the export of nontraditional crops such as sesame seed, melons, and vegetables is expanding.

El Salvador's primary agricultural imports are wheat, vegetable oil, tallow, protein meal, cotton, and corn. Imports of wheat have grown steadily as consumption of wheat products, especially pasta, has increased. Expansion of the poultry industry has led to increased imports of protein meal, yellow corn, and, to a lesser extent, tallow.

Expanding domestic and export markets for soap have also contributed to increased imports of tallow. The demise of the cotton sector has led to increased imports of cotton, protein meal, and vegetable oils.

El Salvador continues to benefit from high levels of U.S. economic assistance, including \$65.2 million in export assistance under U.S. Government programs in 1990.

Trade policy and prospects

El Salvador is now a member of the General Agreement on Tariffs and Trade (GATT). El Salvador has opened its economy by liberalizing its exchange rate system, limiting import licensing requirements, reducing other nontariff trade barriers, and compressing import tariffs to between 5 and 35 percent. El Salvador and its Central American neighbors are trying to integrate their respective economies in order to prepare to negotiate a free trade agreement with the United States.

The Governments of El Salvador, Guatemala, and Honduras have agreed to implement a harmonized variable levy system for selected basic grains and to liberalize interregional agricultural trade. Standardized and fixed tariffs will be established for a variety of agricultural products and price controls will be eliminated once the variable levy mechanism and other liberalization actions have been implemented.

If the United Nations-sponsored accord signed in January 1992 brings lasting peace to El Salvador, the recently adopted economic policies are in place to support prolonged real economic growth. A robust economy, free of war, will do much to expand trade opportunities. Opportunities for increased foreign commerce look promising over the short to medium term. ■

European Community

Profile of agriculture

Formed in 1957 by the Treaty of Rome, the European Community (EC) has grown in size and complexity from the original six member countries (Germany, France, Italy, Belgium, Luxembourg, and the Netherlands) to the current 12. The United Kingdom, Ireland, and Denmark joined in 1973, Greece in 1981, and Spain and Portugal in 1985. This enlargement has meant greater agricultural diversity in the Community in terms of products, farm structures, and farm demographics.

The EC's Common Agricultural Policy (CAP) was the first unified policy applied in all member states. The CAP has three basic principles: common pricing, community preference, and common financing. Common pricing means that a single level of price support is applied for each commodity throughout the EC. Community preference insures that domestic products will always have a competitive advantage over the imported like product. Common financing requires the EC to fund any activity that may be required to carry out the CAP.

The mechanisms of the CAP include high support prices, import protection,

and export restitutions (subsidies). Annual changes in guaranteed support prices and other CAP policies that govern production and marketing of individual commodities are proposed by the EC Commission and approved by the Agriculture Council, which is composed of member countries' agricultural ministers. Guaranteed prices for many commodities are well above world levels.

The EC has a population 40 percent larger than that of the United States, one-third the amount of agricultural land, and three times the number of farms. At 41 acres, the average EC farm is about one-tenth the size of its U.S. counterpart. Many EC countries are burdened by large numbers of very small farms, averaging only a few hectares. While remaining the world's largest agricultural importer, the EC became a major producer and net exporter of many agricultural commodities during the 1980's.

Production highlights

Despite limited land resources and the many small farms, financial security provided by high support prices and protection from lower-priced imports has stimulated intensive use of both fertilizers and high-yielding crop varieties, thus enabling the EC to greatly increase production.

This emphasis on production has led to numerous difficulties including disposal of surpluses, great financial cost, and significant environmental damage. Dependence on export restitutions to reduce internal oversupply and move higher-priced products onto the world market has led to conflicts with many of the EC's trading partners.

Partly because of the use of high-yielding, low-quality varieties, wheat production has skyrocketed, and is now more than 25 percent above domestic needs. In response to similarly attractive support prices, domestic production



European Community at a Glance

Population (1991): 350 million

Population growth rate: 0.3%

Per capita income (1990): \$18,465

Major crops: Grains, sugar beets, oilseeds

Livestock sector: Dairy and beef cattle, hogs, poultry, sheep

Leading agricultural exports: Grains, dairy products, beverages, processed products, live plants

Leading agricultural imports: Soybeans and products, corn and other feed ingredients, tobacco, forest products, fruits, vegetables, cotton, coffee, cocoa

Agricultural imports as a share of total imports: 13%

U.S. share of total agricultural imports: 13%

Percent of labor force in agriculture: 7%

Membership or observer status in economic or trade organizations: CCC, EC, FAO, IBRD, ICAC, ICCO, ICO, IMF, INRO, IOOC, IRC, ISO, IWC, OECD, UNCTAD, WFC

exceeds demand in most major commodities including barley, rye, dairy products, beef, and pork.

Sugar beet producers also receive a guaranteed price. However, the sugar beet sector was the first in the EC to be subjected to production quotas. EC sugar supplies continue to exceed consumption, but the excess is exported at world price levels without the assistance of export refunds.

Production quotas were extended to

Agricultural Production

	1989	1990
	<i>thous. metric tons</i>	
Crop production		
Grains	161.6	157.5
Oilseeds	10.8	13.0
Sugar	4.3	14.7
	<i>mil. head</i>	
Livestock numbers		
Cattle		
Beef	78.3	80.2
Dairy	24.0	23.1
Hogs	101.6	101.9
Poultry		
Sheep	96.1	100.0

Value of Agricultural Imports, 1990

	Total imports \$ bil. ¹	U.S. share %
Selected products		
Animal feed	5.6	26
Coffee, cocoa, spices	5.0	0
Forest products	14.1	13
Fish and products	8.5	5
Fruits and vegetables	11.0	8
Meat	3.2	7
Oilseeds	3.6	50
All agricultural products ²	71.6	13

¹ Values are in U.S. dollars at U.S.\$1=0.785
European Currency Units. Eurostat data.

² Includes products not listed.

the dairy sector in 1984, and though cumbersome to administer, they have succeeded in stabilizing output.

High support prices led to a drastic rise in the production of both rapeseed and sunflowerseed and of soybeans in the past decade. Imports of oilseeds and products have dropped significantly in recent years.

Beef supplies have also risen, despite efforts to deflate production incentives over the past several years. Almost 1 million metric tons were in public storage at the end of 1991.

Farm and food policy

The original focus of the EC's farm policy was to secure an adequate food supply and to support farm income on a scale comparable to urban areas, thereby keeping small farmers on the land.

Modest efforts to reform the CAP since the early 1980's, including the sugar and dairy quota systems, were widely unpopular, complex to administer, and not very successful in reducing surplus production.

Member countries that had become exporters on the basis of EC-financed

refunds did not favor major cutbacks in production incentives and export refunds.

In February 1991, EC farm policy-makers faced increasingly strong budgetary pressures, large structural surpluses, and growing environmental problems. To address these problems, policymakers agreed on a new proposal for a more drastic overhaul of CAP mechanisms. The proposals called for significant reductions in support prices and mandatory production controls, and as compensation offered direct income assistance.

This proposed redirection of EC farm policy is strongly opposed by some EC countries and by the farmer unions in all member states. Agreement on some components of CAP reform proposals is expected sometime in 1992.

Trade trends

As a trading block, the EC is the world's largest agricultural importer (\$72 billion in 1990) and the second largest exporter (\$42 billion in 1990). The EC's strong export position has developed from vigorous response to production incentives, accompanied by the use of export subsidies.

Imports, an increasing proportion of which are value-added processed foods, are on the rise as a result of improved incomes. Expansion of the livestock sector continues to stimulate the demand for imported feedstuffs. Major import items for the EC are soybeans and soybean products, corn, unmanufactured tobacco, cotton, fruits, vegetables, coffee, cocoa, and forest products.

In 1990, the EC purchased \$9.5 billion in farm products from the United States—primarily soybeans and soybean products, feed ingredients, cotton, tobacco, and horticultural products including dried fruits and nuts.

Having developed structural surpluses in many important commodity areas, the EC primarily exports wheat, barley, wine, dairy products, beef, pork, and live

plants. In 1989/90, EC wheat exports accounted for about 20 percent of total world trade in wheat, compared with about 7 percent in the early 1970's.

In 1990, the EC exported \$4.75 billion worth of its dairy products, pork, and other high-value products to the United States, an important market.

Trade policy and prospects

The EC's use of import taxes has drastically reduced access to the EC market for many countries' products, including those of the United States. Nevertheless, the EC is still trying to close off imports of animal proteins, the single largest U.S. export to the EC. Other trade obstacles include the EC's ban of the use of hormones in meat production.

The EC plans to remove internal barriers to the movement of goods, services, labor, and capital in order to create a "single market" by Jan. 1, 1993. Because agricultural production is already covered by a common EC-wide policy, it will be less widely affected by this process. Agricultural trade and U.S. agricultural interests will be significantly affected in areas such as animal and plant health, and food packaging and labeling.

To ensure continued access to the EC market for its agricultural products, the United States is conducting a bilateral dialogue with the EC on a variety of technical issues.

The EC's reluctance to agree to a significant reduction in its agricultural support prices and export subsidies has been a contributing factor to delay in concluding the current multilateral trade negotiations being conducted under the auspices of the General Agreement on Tariffs and Trade (GATT). ■

Finland

Profile of agriculture

More than one-third of Finland lies north of the Arctic circle. Most of the country is low-lying. Over 60,000 lakes and rivers occupy 10 percent of the total area. Eight percent of the land is cultivated, and 66 percent is forested.

Agriculture contributes about 8 percent toward Finland's gross national product and employs 8 percent of Finland's labor force. Agriculture's contribution to the economy increased markedly in 1989 and 1990, as a result of large grain production. However, the

increase did not significantly affect the Finnish economy, as half of Finnish farmers receive incomes from nonagricultural sources.

Because of the cold climate, livestock production is more important than crops. The most productive areas are in the south and southwest. Principal crops are cereals, hay, potatoes, and sugar beets.

Finnish agriculture is based on small family-owned farms that average 13 hectares of arable land and 38 hectares of forest. Agricultural policy does not favor large farms, and the Government restricts increases in cultivable land and numbers of livestock. Many small farmers earn part of their living from forestry.

Farms are highly specialized. About half of Finland's farms are devoted to dairy or grain production, about 8 percent specialize in pigs, and 14 percent specialize in poultry. Dairy farms predominate in eastern and northern Finland, while grain production is concentrated on larger units in southern and western Finland.

The major share of gross agricultural returns comes from milk, followed by beef and pork. These items together accounted for about 56 percent of gross farm returns in 1990. Grain and other plant products accounted for about 27 percent of returns, and poultry and eggs, 5 percent. Forestry accounted for about 10 percent of Finnish farm income.

Finland continues to have costly surpluses of milk, eggs, and, in sharply decreasing amounts, beef and pork, which have resulted in burdensome export subsidies and the need for mandatory supply controls. The level of surpluses has been reduced considerably, however, as Finland's supply control measures have been intensified.

Production trends

Finland is self-sufficient in dairy products, eggs and meat, and, in good harvest years, wheat, barley, and oats.



Finland at a Glance

Population (1991): 5.0 million

Urban population: 62%

Population growth rate: 0.3%

Per capita income (1990): \$22,369

Land use: Crops 8%, meadows and pastures negligible, forest and wood lands 76%, other 16%

Major crops: Barley, oats, sugar beets, potatoes

Livestock sector: Poultry, dairy cattle, hogs

Leading agricultural exports: Dairy products, furskins, meats, oats

Leading agricultural imports: Coffee, fresh fruits and vegetables, fishmeal, soybeans, tobacco

Agricultural imports as a share of total imports: 5%

U.S. share of total agricultural imports: 6%

Percent of labor force in agriculture: 8%

Membership in economic or trade organizations: EFTA, GATT, OECD

In 1991, the Finnish wheat, rye, and oat crops were down sharply from the unusually good seasons of 1989 and 1990 when weather conditions were ideal. Finnish barley, in contrast, did very well. Aggregate grain production in 1991 resulted in an estimated 760,000 tons exportable surplus, of which 315,000 tons were oats.

A set-aside program for grain production attracted 175,000 hectares in 1990. The set-aside goal of 350,000 hectares in 1991 was reached, as non-participation in the program resulted in an "export assessment" on 15 percent of

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Barley	1,720	1,749
Oats	1,662	1,109
Potatoes	881	672
Rapeseed	125	120
Sugar beets	1,126	1,035
Wheat	627	419

	<i>thous. head</i>	
Livestock numbers ¹		
Cattle		
Beef	15	20
Dairy	510	488
Heifers, bulls	327	339
Calves	516	475
Hogs	1,348	1,290
Poultry	9,560	7,500
Sheep	102	100

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	117	118
Butter	64	54
Cheese	80	77
Eggs ²	103	92
Milk, cow	2,749	2,482
Pork	186	184
Poultry meat	33	36

¹ As of June 1.

² Million dozen.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Apples	51	20
Forest products	865	2
Oranges	33	²
Pears	7	29
Rice	10	30
Soybeans	36	56
Tobacco	42	64
All agricultural products³	2,218	6

¹ Values are shown in U.S. dollars based on average 1990 exchange rate of U.S.\$1 = 3.83 finmarks.

² Less than 0.5 percent.

³ Includes products not listed.

each farm's grain land not set aside.

Milk production decreased about 10 percent in 1991 in response to a Government compensation program to farmers who cut milk production.

Potatoes which yield well even in the far north, rutabagas, and sugar beets are the most important root crops.

Both beef and pork production remained unchanged in 1991 from the previous year. The exportable surplus in 1991 was estimated at 11,000 tons of beef and 19,000 tons of pork.

The poultry market is in good balance, requiring neither exports nor imports. The exportable surplus of eggs was estimated at 17 million dozen in 1991, a 39-percent decrease from the previous year. A further reduction of 20 percent is expected in 1992.

Farm and food policy

The basic goals of Finnish agricultural policy are to develop farm income while holding consumer prices at reasonable levels, to ensure self-sufficiency in basic foodstuffs, to develop the structure of agriculture, and to maintain the rural population.

Since World War II, Finland's

agricultural policy has transformed agriculture into a more productive sector and reduced the country's dependence on imports. However, the support system has resulted in both relatively high food prices and export subsidies, the latter paid largely by the Government.

Agricultural prices are regulated. Prices are set twice a year, following discussions among farmers, their organizations, and the Government.

Spring negotiations take into account cost increases from the previous fall settlement, the development of farm income measured as the difference between target prices and actual prices received, and the development of income for other groups in society. The fall settlements are much more limited; incomes are not negotiated and capital costs are not taken into account.

The current 5-year Farm Income Act remains in effect until the end of 1994. The major change, compared to the previous act, is that producers' responsibility to finance agricultural export subsidies was considerably increased.

Supply controls have dominated agricultural policy, resulting in reductions in surpluses.

In 1985, the Government instituted a dual-price system for milk. The system is the major reason for the decrease in dairy cow numbers from 628,000 in 1985 to 497,000 in 1990.

The system established production ceilings on milk deliveries for each dairy farm. It set quotas for all producers who normally deliver over 30,000 liters of milk per year. Deliveries above quota are penalized by a price reduction. Quotas have also been established for individual dairy plants.

Trade trends

Finland is a net agricultural exporter (when forest products are included), with purchases of \$2.2 billion in 1990 versus exports of \$10.8 billion.

Finland exported \$784 million in food

and agricultural items in 1990, and an additional \$10.0 billion in forest products. About 10 percent of the agricultural products—mainly oats, cheese, chocolate candy, and pork—went to the United States. About 4 percent of Finland's forest product exports went to the United States.

Finland's largest agricultural export item in 1990 (aside from forest products) was unprepared hides and skins, valued at \$133 million. Of these, the United States imported \$8 million worth.

As a result of the smaller grain crop in 1990, exports of grain and products decreased to \$51 million compared to \$69 million in 1989. Dairy product exports, at \$185 million, were 41 percent higher than in 1989.

The largest agricultural import by value is coffee, valued at \$133 million in 1990. Fruits, vegetables, soybeans, and tobacco are other big import items.

Finland's agricultural imports from the United States in 1990 totaled \$125 million, down \$17 million from 1989. Soybeans, raw tobacco, wood products, fruits, and wheat were the leading items imported from the United States.

Trade policy and prospects

Finland is a member of the European Free Trade Association, a group of European countries that has eliminated tariffs on manufactured goods traded between member countries. In addition, in March 1992 Finland applied to join the European Community.

Finland has traditionally used extensive and expensive agricultural subsidies to finance exports of surplus production. The current global recession has hit Finland hard and is forcing the Government to accelerate its efforts to reduce burdensome agricultural surpluses. Finland applies trade regulations, primarily import licensing, to protect its agriculture from competitive imports. ■

France

F

Agricultural Production

	1990	1991
	thous. metric tons ¹	
Crop production		
Fruits		
Apples	1,865	1,083
Cherries	72	44
Peaches and nectarines	501	416
Pears	325	186
Prunes, dried	37	24
Grains, total	55,200	60,200
Barley	10,100	10,700
Corn	9,500	12,400
Wheat, including durum	33,600	35,100
Oilseeds and feed		
pulses, total	4,580	5,104
Rapeseed	1,930	2,269
Sunflowerseed	2,370	2,654
Pulses for feed	3,688	3,198
Sugar beets	26,369	26,103
Walnuts	25	12
Wine grapes ²	65,529	43,500

	<i>thous. head</i>	
Livestock numbers		
Cattle	19,980	19,886
Beef	3,595	3,639
Dairy	5,489	5,270
Hogs	11,860	11,860
Sheep	11,500	11,500

	<i>thous. metric tons¹</i>	
Animal product output		
Beef and veal	1,753	1,800
Butter	527	500
Cheese	1,490	1,510
Dry milk	827	750
Eggs ³	14,629	14,800
Lamb, mutton, and goat	193	190
Milk, cow	26,400	26,300
Pork	1,870	1,890
Poultry	1,651	1,700

¹ Except as noted.

² Thousand hectoliters.

³ Million eggs.

Profile of agriculture

France is the leading agricultural producer in Western Europe, one of the world's largest exporters of wine, wheat, cheese, and poultry meat, and a major competitor of the United States. A member of the European Community (EC), France accounts for about one-fourth of total EC farm production and nearly one-third of all agricultural land within the Community.

Northern France is characterized by very large wheat farms. Milk, pork, and poultry production is concentrated in Normandy and Brittany. Mediterranean agriculture in the south is characterized by small wine and olive farms.

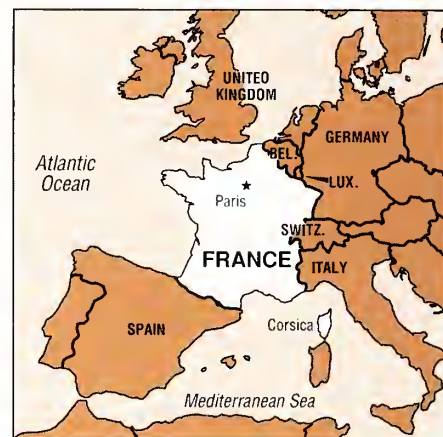
The farm labor force is only 6 percent of the total labor force but the French farm trade surplus of \$10 billion in 1990 offset one-third of the French industrial trade deficit. France has become self-sufficient or an exporter of most agricultural products, except protein feeds, and tropical and horticultural products.

The number of French farms, 966,000 at the end of 1990, is expected to decline rapidly to about 650,000 farms by the year 2000 as the generation of small farmers established just after World War II retires.

Average farm size in 1988 was just over 28 hectares, but in the Paris Basin, the center of wheat production, the farms are much larger, averaging up to 49 hectares. Wheat yields per hectare in the Basin are three times greater than in Kansas.

Production trends

After 2 extremely good years, French farmers were hit by a late spring freeze in 1991 that reduced the wine grape crop by one-third and the tree fruit crop by one-quarter. Grain production, however, set a record. Average real agricultural income per farm decreased 7 percent in 1991 following strong increases of 9 and 7 percent the previous 2 years.



France at a Glance

Population (1991): 56.6 million

Urban population: 75%

Population growth rate: 0.4%

Per capita income (1991): \$15,500

Land use: Crops 34%, meadows and pastures 23%, forest and woodland 27%, other 16%

Major crops: Wine grapes, wheat, sugar beets, corn, barley, feed peas, sunflower, rapeseed, apples

Livestock sector: Dairy and beef cattle, hogs, poultry

Leading agricultural exports: Wine and alcoholic beverages, grains, dairy products, beef, poultry meat, sugar

Leading agricultural imports: Meat and offals, fresh and dried fruits, wood and products, protein meals and other feeds

Agricultural imports as a share of total imports: 11%

U.S. share of total agricultural imports: 4%

Percent of labor force in agriculture: 6%

Membership in economic or trade organizations: EC, GATT, OECD, UNCTAD

Overall, the value of agricultural products sold from French farms declined 3 percent in 1991 to \$57 billion.

The livestock sector had a difficult year in 1991. Meat production increased at the same time that imports rose and consumption fell. Consequently, prices received by farmers fell 7 percent for livestock. French cattle and sheep

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Beverages	1,328	1
Dairy and eggs	1,132	0
Fruits, fresh and dried	2,460	5
Fruits and vegetables, processed	1,372	4
Grains	401	33
Meat and offals	3,599	3
Oilseeds and seeds	479	15
Protein meals and other feeds	1,432	10
Wood and products	2,078	5
Vegetables, fresh and dried	1,372	2
All agricultural products ²	25,799	4

¹ Values are shown in U.S. dollars based on the 1990 annual average exchange rate of U.S.\$1=5.45 French francs.

² Includes products not listed.

producers protested the price declines and pressured the Government to strengthen controls on imports. The cattle sector seems to be in a cyclical decline and could rebound any year. The sheep sector shows a continuous long-term decline.

French broiler and turkey production increased 5 percent while prices remained stable. France, the United States, and Brazil are by far the largest poultry exporters in the world. The trend is for continued strong increases in production and exports, especially exports to other EC countries.

Farm and food policy

French and EC agricultural policies play a large role in promoting increased farm income, production, and exports, with mixed success. By 1989, large

subsidies had pushed up average farm household income to 21 percent above average French household income. However, these policies also encouraged large surplus stocks of meat and grain, huge consumer subsidies, and environmental damages.

One initiative to support agriculture is a voluntary early retirement program begun in 1992; officials hope this will speed an increase in French farm size. The new land transfer tax laws should also facilitate farm consolidation.

The French Government also directly assists farm incomes through tax concessions, subsidized credit, and social security programs. National expenditures for agriculture are among the highest in the EC.

France has an efficient and modern food processing and distribution system with comparatively little direct Government intervention. Many companies have diversified vertically by purchasing wholesalers, packaging plants, and supermarkets in an effort to survive in what is expected to be an increasingly competitive European food market.

Trade trends

For the third consecutive year, French agricultural exports in 1990 set a new record, \$35 billion. Agricultural imports increased to \$26 billion.

Agricultural exports accounted for 17 percent of total French exports in 1990. Beverages (mostly wine) accounted for 20 percent of the agricultural exports, grains for 17 percent, and dairy products for 10 percent. EC export subsidies for grain sold to third countries in 1991 were often greater than the sale price. About 70 percent of French agricultural exports go to other EC countries.

Agricultural imports accounted for 11 percent of total imports in 1990. Fresh fruit and vegetables accounted for 15 percent of the agricultural imports, and meat and offals for 14 percent. About 60 percent of French agricultural imports come from other EC countries.

Despite its positive agricultural trade balance, France continued to experience a trade deficit in grocery goods, canned and packaged products, fruit juices, and bakery products.

The United States remained the leading non-EC market for French agricultural exports, accounting for \$1.2 billion or 3 percent of total French agricultural exports. Wine and champagne accounted for over 75 percent of the exports to the United States. France imported \$920 million of U.S. agricultural products in 1990: mainly protein meals, grains, meat and offals, and fresh fruit.

France is a major international competitor of the United States in several products including wheat, barley, wine, poultry meat, apples, walnuts, and prunes.

Trade policy and prospects

The basic agricultural trade philosophy of the French is that exports must be maintained or increased to offset the industrial trade deficit and to prevent the countryside from becoming deserted. Therefore, the French consider EC export subsidies to be essential.

French farmers are fighting vigorously to protect the EC's Common Agricultural Policy (CAP) from being changed by the multilateral trade negotiations currently being conducted under the auspices of the General Agreement on Tariffs and Trade (GATT). However, the largest French agricultural export, wine, receives few supports and no export subsidy and generally benefits from open markets worldwide.

The complex EC system of tariffs, levies, quotas, and phytosanitary regulations restricts or prevents imports of many agricultural products. French national phytosanitary regulations prevent the importation of other products, such as poultry meat. ■

Germany

G

Profile of agriculture

The Federal Republic of Germany (West Germany) and the German Democratic Republic (East Germany) were reunited in 1990, ending 45 years of political, economic, and social division following World War II. The impact of reunification is still being felt by the country's agricultural sector.

Agriculture's role in the German economy remains limited. In 1991, it accounted for 1.5 percent of gross national product, and employed 3 percent of the labor force. Agriculture still has a much more important role in the new eastern states where it accounts

for 10 percent of GNP.

Germany covers nearly 350,000 square kilometers (about the size of Montana), with roughly half of the land used for agriculture and 30 percent covered by forests. Germany is a major livestock producer and is self-sufficient in many primary commodities.

Germany has a moderate, maritime climate. Adequate rainfall throughout the year supports a diversified agricultural base. Livestock farming is concentrated in the north, while fruit and vegetable farming is found mainly in the south. Most other crops are grown throughout the country.

While considerable convergence has occurred in 1991, differences remain in the level of development and structure of agriculture between the western and eastern states. Western farmers employ high levels of labor, chemicals, and machinery to produce high yields on small farms. Western farm production costs remained high, partly because the average farm size is 19 hectares and an average farm employs five workers per 100 hectares.

In the eastern states, yields continue to improve, and the average farm size is 290 hectares. However, most farms still lack capital to upgrade equipment and facilities, and face very high labor costs. By December 1991, the labor force in the eastern states had fallen from 800,000 to less than 400,000 workers. This drop still left roughly seven workers per 100 hectares. Farm labor numbers are expected to fall further to under 200,000. The former cooperatives farmed 87 percent of all agricultural land. During 1991, a fourth of the cooperatives were dissolved and their holdings were returned to former owners. The balance were converted to about 18,000 new enterprises of various types.

Production trends

Major changes in the livestock sector of the eastern states resulted from restructuring. In 1990 and 1991, eastern



Germany at a Glance

- Population (1991):* 80.2 million
- Population growth rate (1991):* 0.4%
- Per capita income (1991 est.):* \$17,937
- Land use:* Crops 35%, meadows and pastures 16%, forest and woodland 30%, other 19%
- Major crops:* Barley, wheat, silage corn, rapeseed, rye, sugar beets, oats, potatoes
- Livestock sector:* Dairy and beef cattle, hogs, poultry—layers
- Leading agricultural exports:* Dairy products, meat and animal products, forest products, wine and spirits, tobacco products, oilseeds and products, juices, bakery products, sugar, cocoa products, coffee
- Leading agricultural imports:* Fruits (temperate), vegetables, forest products, meat and products, dairy products, oilseeds and products, wine and spirits, ornamental plants, tropical fruits and nuts, fish and products, coffee, nongrain feeds
- Agricultural imports as a share of total imports:* 11%
- U.S. share of total agricultural imports (1990):* 5%
- Percent of labor force in agriculture:* 3%
- Membership in economic or trade organizations:* ADB, CCC, CE, EC, EMS, GATT, IBRD, ICAC, ICO, IDA, IDB, IFC, IMF, OECD, WSG

Agricultural Production

	1990	1991
	thous. metric tons ¹	
Crop production¹		
Grains	37,579	39,280
Oilseeds ²	2,130	3,008
Potatoes	14,039	9,856
Sugar beets	30,366	26,000

	thous. head	
Livestock numbers³		
Cattle, total	20,288	19,488
Dairy	6,886	6,355
Hogs	34,178	30,818
Poultry, layers	67,400	61,200

	thous. metric tons	
Animal product output		
Beef and veal	2,112	2,200
Butter	665	550
Cheese	736	720
Eggs ⁴	16,850	15,600
Milk	31,372	28,900
Pork	3,785	3,325
Poultry meat	599	570
Skim milk powder	562	528

¹ Crop production data for 1991 are based on planting intentions.

² Rapeseed and sunflowerseed only (other crops are insignificant).

³ As of January 1.

⁴ Million eggs.

hog and cattle inventories were significantly reduced. Hog numbers are expected to stabilize in 1992, whereas a downward adjustment in cattle herds, in response to EC dairy quotas, should

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Citrus, tropical fruits and nuts	1,977	10
Cocoa and products	990	²
Coffee	1,482	²
Cotton	452	18
Dairy products	2,793	²
Fish and products	1,563	²
Forest products	5,989	12
Fruits and vegetables ³	7,63	11
Meat and products	4,732	²
Nongrain feeds ⁴	1,176	18
Oilseeds and products	2,178	20
Ornamental plants	2,003	²
Tobacco and products	938	28
Wines and spirits	2,085	1
Wool	731	²
All agricultural products⁵	44,142	5

¹ Values are shown in U.S. dollars at U.S.\$1=1.62 Deutschmarks.

² Zero or less than 1 percent.

³ Includes juices, and excludes citrus and tropical fruits.

⁴ Includes oilcakes and meals.

⁵ Includes products not listed.

continue at a moderate rate throughout Germany.

Access to improved seed, modern management techniques, and investments in better machinery continue to improve eastern crop yields. The crop distribution pattern in the eastern states is now similar to that found in western Germany. Crops which offer the highest gross margins are sugar beets, winter wheat, corn, rapeseed, and barley.

Annual grain yields are rising at a rate of between 2 and 3 percent. Based on current trends, intervention stockpiles likely reached a record 9 million tons by January 1992. Farmers favor winter wheat and barley, corn, and triticale

because of their comparatively steady and high yields.

Overproduction problems also exist for sugar beets and milk, increasing the costs to store and export surpluses.

Farm and food policy

As a member of the European Community (EC), Germany's national policies are largely aligned with EC policy and subsidy rules. While many commodity prices are regulated, German consumers still spend only 17 percent of disposable income on food.

Germany's national farm policy goals are to conserve the countryside in an environmentally sound manner, maintain the family farm structure, and protect consumer health.

Germany promotes EC programs to reduce overproduction, including land set-asides which reached 900,000 hectares in 1991. EC-mandated supply controls remain marginally successful for dairy products, grains, and beets.

Unemployed farm labor in eastern Germany is causing considerable concern, and structural problems in western Germany continue to lead to calls for additional spending on structural adjustment programs.

Trade trends

(Note: Trade data in this report are for reunified Germany beginning in 1990, and for the former Federal Republic of Germany prior to 1990.)

Germany has long been one of the world's largest net importers of food, agricultural, and wood products. In 1990, these imports reached \$41.7 billion. Exports were \$21.8 billion, leaving an agricultural trade deficit of \$19.9 billion. While Germany trades primarily with the EC and other European countries, it continues to be a leading market for many U.S. products. From 1988 to 1990, German imports of U.S. food and wood products remained steady at \$1.8 billion annually.

Germany also is one of the world's largest exporters, thanks to an advanced food-processing industry and EC production supports and export subsidies. In 1990, major exports included high-value, consumer-ready goods, milk products, meats, wood products, tobacco products, and grains. Purchasing 67 percent of all German exports in 1990, EC member countries continued to be the best customers.

Trade policy and prospects

Germany's food and agricultural policies are influenced by its membership in the EC. EC preference and protective import duties make it difficult for non-EC companies to compete with a number of German food and agricultural products.

In the absence of EC regulations, or in cases where they do not take precedence, Germany applies its own regulatory policies on food law and veterinary affairs. In some instances, German food laws are stricter than those of the EC. In the future, Germany fully expects to continue to put its stamp on EC food law and veterinary regulation.

Official and public antipathy to biotechnology and genetic engineering research has forced some German firms to locate such research outside Germany. This is a continuing source of concern to German business and scientific communities.

Faced with environmental problems stemming from ever-increasing volumes of solid waste, Germany introduced an ordinance in 1991 that will ultimately require all packaging to be made of environmentally friendly materials. When fully in effect, the law will require that all packaging materials either be taken back by the firms marketing them, or be collected for reuse or recycling. The law applies equally to domestically produced and imported packaging materials. ■

Profile of agriculture

Ghana is only a few degrees north of the equator on West Africa's Gulf of Guinea. The climate is equatorial on the coast, with increased heat and humidity in the southwest region, dry heat in the southeast, and hot plains in the north. Approximately 11 percent of the country is cultivated and one-third is covered by forests. The north region is prone to drought, and production there is severely affected by deforestation, overgrazing, and soil erosion.

Agriculture is vital to Ghana's overall growth and development. As the largest economic sector, it contributes about 50 percent to the gross domestic product (GDP). Agriculture also accounts for about 60 percent of export earnings, and directly or indirectly supports 80 percent of the total population. Food production is low, however, because of insufficient incentives and infrastructure.

Approximately 1.8 million land holders (out of a rural population of 10.1

million) cultivate about 30 percent of the available farmland estimated at 13 million hectares. Of these holders, 85 percent use traditional labor intensive methods to farm small plots of less than 2 hectares. Sixty percent of total farms are less than 1.2 hectares, and 25 percent are from 1.2 to 2 hectares.

Root and tuber crops (cassava, yams, and cocoayams) are the most important. These contribute about 46 percent of agricultural GDP. Cocoa is the second largest crop, contributing about 13 percent of agricultural GDP. Forestry, the third largest sector, accounts for 11 percent, and livestock less than 4 percent.

Ghanaian agriculture is almost totally reliant on timely and adequate rains. Less than 1 percent of the arable land is irrigated. The predominance of small labor-intensive farms mitigates against the production of cereal grains. These factors have forced Ghana to import food grains.

The livestock industry is not large. The average Ghanaian consumes 2,000 calories daily, the bulk of which (44 grams) comes from plants rather than animals.

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Cassava	2,717	5,701
Cocoa	295	290
Corn	553	931
Plantains	798	1,178
Rice, milled	50	150
Sorghum and millet	210	353
Yams	877	2,631

	<i>thous. head</i>	
Livestock numbers		
Cattle	1.2	1.3
Goats	2.8	2.8
Hogs	0.7	0.7
Poultry	9.7	9.6
Sheep	2.5	2.5

Production trends

Economic reforms and favorable weather since 1983 provided conditions for a dramatic rise in agricultural production. The agricultural sector is a major beneficiary of Ghana's drive toward privatization of the economy.

Cocoa bean production remains near the Government target of 300,000 metric tons annually. The Ghana Cocoa Board began privatizing its holdings in 1990. Few buyers were interested because the Cocoa Board retained a monopoly on buying from the farmer and on exporting. However, the Cocoa Board is apparently going to be privatized in 1992 and will no longer control the local purchase of cocoa beans. It will retain control of exports.



Ghana at a Glance

Population (1991): 15.6 million

Urban population: 30%

Population growth rate: 3.2%

Per capita income (1990 est.): \$380

Land use: Crops 12%, meadows and pastures 15%, forest and woodland 37%, other 36%

Major crops: Cocoa, cassava, yams, corn, rice, forest products

Livestock sector: Poultry, sheep, goats, cattle, hogs

Leading agricultural exports: Cocoa and products, forest products, nuts, pineapples, peanuts

Leading agricultural imports: Rice, wheat and flour, milk powder, vegetable oil, fish

Agricultural imports as a share of total imports: 10%

U.S. share of total agricultural imports: 19%

Percent of labor force in agriculture: 55%

Membership in economic or trade organizations: AFDB, ECOWAS, FAO, GATT, IBRD, IDA, IMF, ISO, OAU, UNCTAD

Cassava, yams, and cocoayams are the dominant products in the Ghanaian consumer diet. The production of these roots and tubers increased by about 4 percent over the past 10 years, reaching new production peaks in 1991. Production of these basic crops is projected to remain relatively stable in

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Corn	1.1	69
Cotton	7.4	0
Milk powder	0.9	13
Rice	47.5	13
Vegetable oil	2.3	35
Wheat	27.2	22
Wheat flour	2.7	28
All agricultural products ²	120.0	19

¹ Estimated. Values are shown in U.S. dollars at U.S.\$1=270 cedis.

² Includes products not listed.

the next few years. Plantain production is also expected to remain relatively constant.

Production of cereal grains, including corn, rice, sorghum, and millet, has fluctuated over the past few years depending on the frequency and distribution of rainfall. Production always falls short of needs and imports will continue to be required.

Harvest of forests has been a major foreign exchange earner for Ghana. However, the Government is stressing sound ecological management. Many of its policies impact the forestry subsector and are expected to reduce that sector's harvest.

The livestock sector shows little growth with the exception of increasing broiler and layer numbers. This sector is expected to remain small.

Food and farm policy

Ghana has followed a policy of economic reform since 1983, under guidelines of the World Bank and the

International Monetary Fund. It devalued its currency to a realistic exchange rate, abolished import licensing, and sought to encourage the private sector. The major agricultural objectives are:

- Self-sufficiency in the production of cereals, starch tubers, and animal proteins;
- Maintenance of an adequate buffer stock of grains;
- Self-sufficiency in industrial raw materials, such as cotton, palm oil, tobacco, and peanuts;
- Increased output of cocoa and other exportable crops; and
- Improved storage, processing, and distribution systems to minimize post-harvest losses.

Guaranteed minimum producer prices are still fixed for cocoa, but attempts to fix minimum prices for corn and rice ceased in 1990.

Other key Government policies include developing improved infrastructure and extension services, reducing subsidies, shrinking Government's presence in direct production efforts, and privatizing more agricultural enterprises.

The Government is gradually relinquishing some large-scale farming operations, and the Cocoa Board has attempted to sell a number of its farms.

Trade trends

Ghana is a net exporter of agricultural products as a result of its pre-eminent position as a cocoa bean exporter. However, food imports are becoming more important and are expected to exceed exports in the near future.

The major import commodities are wheat and rice. Flour milling capacity has increased in the past 5 years, requiring larger wheat imports. Wheat, like other imports, is purchased on the basis of price. Wheat is purchased by a

quasi-Government monopoly, Ghana National Procurement Agency (GNPA), through regular tenders. Wheat imports should continue at present levels.

Rice demand far exceeds domestic production, and imports are vital for Ghana's food security. Imports, up every year for the past 5 years, are expected to continue to increase. Rice is purchased by private traders, with the 35 percent broken grade being the most popular.

Cocoa bean exports—accounting for half of annual export revenues—have been and remain the major foreign exchange earner for Ghana. The Cocoa Board is expected to privatize the local purchasing of cocoa beans this year, but will retain control of exports for the time being. The details of the proposed privatization are not yet known, but will be of supreme importance to the economy.

Trade policy and prospects

Ghana embarked on trade liberalization in the late 1980's. This liberalization has resulted in greater imports of food and agricultural products as well as greater exports of nontraditional food products.

The mandated privatization of the Ghana Food Distribution Corporation (GFDC) has brought changes in its purchasing patterns, including imports. Imports of food and agricultural products are expected to become more important to GFDC.

Most importers need financing and are required to participate in a weekly foreign exchange auction run by the Central Bank. The success or failure of potential importers depends on their access to bank financing and/or their ability to obtain foreign exchange. Alternatively, many European sellers provide credits to Ghanaian buyers. ■

Profile of agriculture

Agriculture in Greece accounted for around 12 percent of the gross domestic product and 22 percent of the work force

Agricultural Production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Crop production		
Alfalfa	1,489	1,480
Barley ²	480	750
Corn ²	1,400	1,850
Cotton ²	210	192
Oranges ²	819	703
Peaches and nectarines ²	760	800
Sugar beets ²	276	335
Tobacco ³	120	161
Tomatoes ²	1,800	1,800
Wheat ²	1,680	2,800

	<i>thous. head</i>	
Livestock numbers		
Cattle	687	634
Beef	445	389
Dairy	242	245
Goats	10,450	10,450
Hogs	1,100	1,141
Poultry	40,686	40,686
Broilers	23,874	23,874
Layers	16,819	16,819
Sheep	10,150	9,759

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	82	80
Butter	6	5
Cheese	210	205
Eggs ⁴	257	256
Milk	1,868	1,850
Cow	738	715
Other	1,130	1,135
Pork	147	151
Poultry meat	160	161

¹ Estimated.

² Marketing years vary by commodity: July-June for barley, peaches and nectarines, sugar beets, tomatoes, and wheat; Aug.-July for corn and cotton; and Sept.-Aug. for oranges.

³ Dry weight basis.

⁴ Million dozen.

in 1990, a larger component of the economy than for most other European Community (EC) countries. Although the trend is occurring later than in most other West European countries, the importance of agriculture in the economy has been declining.

Much of Greece's terrain is too mountainous for agriculture. Much of the hilly and mountainous pasture is not very productive because of sparse rainfall, poor, thin soils, and centuries of overgrazing.

Greek agriculture is characterized by small, fragmented farms (averaging about 2.5 hectares in size, divided into 6 separate plots), which produce traditional crops, including olives, cereals, fruits, vegetables, and tobacco.

Such "Mediterranean" products accounted for 72 percent of the value of agricultural production in 1990, while meat and dairy production accounted for 28 percent, the reverse of northern European EC countries.

Nevertheless, much of the limited flatland agriculture is modern and productive.

About 75 percent of Greece's nearly 1 million farms are 5 hectares or smaller, while only 0.1 percent are more than 50 hectares. Another severe structural problem is the lack of sufficient irrigation networks. The Eastern Mediterranean region often experiences drought.

Production trends

Production of cereals, sugar beets, cotton, tobacco, tomatoes for processing, and some other crops has grown rapidly since Greece joined the EC in 1981. Greece is generally self-sufficient or a surplus producer of cereals, fruits, and vegetables, but must import meat and dairy products.

The value of agricultural production in current prices recovered in 1991 after a fall of 6 percent in 1990 due to drought. Winter wheat, pastures, and the summer vegetable crops have fully recovered.



Greece at a Glance

Population (1991): 10.3 million

Urban population: 64%

Population growth rate (1991): 0.5%

Per capita income (1990): \$6,680

Land use: Crops 31%, meadows and pastures 40%, forest and woodland 20%, other 9%

Major crops: Fruit, wheat, olives, tomatoes, corn, barley, sugar beets, cotton, tobacco

Livestock sector: Poultry, goats, sheep, hogs

Leading agricultural exports: Fresh and processed fruits and nuts, grains, olives, cotton, tobacco

Leading agricultural imports: Meat and dairy products, forest products, fish, miscellaneous preparations, oilseeds

Agricultural imports as a share of total imports: 18%

U.S. share of total agricultural imports: 5%

Percent of labor force in agriculture: 22%

Membership in economic or trade organizations: EC, GATT, OECD

Among spring crops, tobacco, sugar beets, and corn production increased sharply, mostly due to abundant rain in 1991. Most other crops were stable, but quality and yields generally were improved. Livestock production continued to stagnate. The 1990 drought affected both 1990 and 1991 tree crops.

Citrus production declined again in 1991 to almost 14 percent below the 1990 harvest. Deciduous fruit output was mixed, but generally lower. The most

Value of Agricultural Imports, 1989

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Cotton	70	22
Dairy products	510	-
Fish	157	3
Forest products	365	35
Grains	179	9
Meat and edible grains	814	1
Misc. edible preparations	139	2
Oilseeds	130	67
Sugar and confectionery	20	-
Tobacco	110	3
All agricultural products ²	3,612	5

¹ Values are shown in U.S. dollars at CY 1990 exchange rate of U.S.\$1=158.10 drachmas.

² Includes products not listed.

important deciduous fruit crop, peaches, dropped 8 percent. About one-third of the crop is processed, principally for export. Production of several fruit crops, especially peaches, apples, and oranges, in recent years has been far above domestic or export demand, and as much as one-third of these crops is annually withdrawn from the markets, and is eligible for EC assistance.

Outturn of tomatoes for processing was at the same level as in 1990 (1.8 million tons). One of Greece's most important agricultural exports is processed tomato products which benefit from an EC subsidy.

Harvesting problems due to excessive soil moisture affected quality, reduced yields, and pushed cotton production down almost 9 percent. Since Greece has joined the EC, the cotton area has expanded significantly, stimulated by the high EC guaranteed support price.

During 1991, wheat production increased by 40 percent as a result of better weather conditions. Sixty percent

of the crop was durum (hard) wheat. Although Greece is nominally self-sufficient in wheat, EC price supports have boosted the durum area at the expense of soft wheat. Durum wheat is now an important export crop, while domestic soft wheat needs are met by imports from France, the United Kingdom, Spain, and sometimes the United States.

Farm and food policy

Greece joined the EC in 1981 and became a full member in 1986. Greek producers of EC-supported crops, especially cereals, cotton, tobacco, sugar beets, peaches, and tomatoes for processing have benefited greatly from high EC support prices and processing subsidies. A variety of EC funds have provided co-financing for rural infrastructure and agricultural development.

In the EC, Greece's principal objectives are to insure support from the other EC members to preserve and improve the incomes of Greece's small traditional farmers.

Greece's major national agricultural policy goals include restructuring production toward crops with higher demand, improving very low livestock and dairy productivity, improving farming infrastructure, and reorganizing the heavily indebted but all-important farm cooperative sector.

Trade trends

After Greece became a full member of the EC in 1986 (when it had to open its borders to EC imports), its agricultural trade deficit ballooned. Greece's agricultural trade deficit totaled \$1.2 billion in 1990, when it imported \$3.6 billion and exported \$2.4 billion worth of agricultural products.

Virtually all of Greece's agricultural trade deficit comes from meat and dairy products. The livestock sector has been unable to respond to growing demand for these products as per capita incomes

and consumption have risen.

About 70 percent of the value of Greece's agricultural import and export trade is now with the EC.

Soft wheat accounted for most cereal imports in 1990. Although Greece is nominally self-sufficient in feed grains in years of normal rainfall, some corn or barley may be imported to replace exports of high-quality corn for starch.

Imports of forest products have been growing to satisfy an extended construction boom. The United States supplies about 10 percent of these imports.

Greece's principal exports are fresh and processed fruits and vegetables, durum wheat, oriental tobacco, olives, and cotton. Greece's primary outlet for citrus exports was Eastern Europe. Sales have fallen sharply in the past three years because of foreign currency shortages in those countries.

In 1990, the United States recorded a small agricultural trade surplus with Greece. Greece imported \$185 million worth of U.S. agricultural products in 1990 led by oilseeds, forest products, and cotton. U.S. imports amounted to \$105 million, mainly from processed vegetables, fruits, nuts, and tobacco.

Trade policy and prospects

After Greece joined the EC, it gradually eliminated most, though not all, of its long-standing protectionist non-tariff trade barriers.

One of the country's primary concerns is to improve production and exports of crops for which it has a comparative advantage, as well as to strengthen the competitiveness of its food processing sector. This sector, along with the troubled meat and dairy industries, is expected to come under greater pressure from imports when the internal trade barriers are eliminated by all EC members sometime after 1993. ■

Guatemala

Profile of agriculture

Guatemala is the most agriculturally productive and populated Central American country. It has the third largest land area after Nicaragua and Honduras. However, Guatemala's rapid population growth rate is pressuring the country's ability to expand per capita agricultural output.

The agricultural sector is the driving force in the country's economy, contributing 26 percent of the gross national product, providing 76 percent of export earnings, and employing approximately 60 percent of the labor force.

The agricultural sector is characterized by both commercial and subsistence farming. The large commercial operations and their associated agroindustries are located primarily on the low-lying, fertile, southern coastal plain and in and around Guatemala City. The small-scale operations, primarily located in the western highlands, are operated by subsistence producers who grow beans, corn, and vegetables for home use.

The production of premium-grade

coffee dominates the agricultural economy, but Guatemala also produces a variety of other commodities. It is the world's largest exporter of the spice cardamom; a major producer and exporter of bananas; and a developing producer and exporter of shrimp, lobster, seafood, cut flowers, fruits, and vegetables.

Corn and beans are grown throughout Guatemala and are the staple foods for most Guatemalans, especially the indigenous Indian population. In addition, Guatemala produces cotton, honey, rubber, sesame seed, sugarcane, tobacco, and wheat.

Poultry production has experienced a prolonged period of robust growth. Poultry meat has replaced beef as the popular meat choice because it is affordable and available.

Production trends

Coffee production initially expanded after the July 1989 suspension of economic provisions under the International Coffee Agreement (ICA), but is now slowly decreasing due to prolonged depressed prices.

Sugar is the second most important export crop. Sugarcane production has grown rapidly over the past 5 years. However, sugar production is not expected to increase over the near term as a result of lower international prices and diminished export opportunities to the United States.

Banana production was established in Guatemala almost 100 years ago and rapidly became an important export crop and source of foreign exchange. Banana production has remained stagnant the past several years as labor disputes have plagued the industry.

Guatemala is the world's largest exporter of cardamom and is second only to India in production. The sharp increase in production in the early 1980's has been followed recently by a period of production decreases. A plant disease has damaged production on the south



Guatemala at a Glance

Population (1991): 9.6 million

Urban population: 38%

Population growth rate: 2.9%

Per capita income (1991): \$1,180

Land use: Crops 16%, meadows and pastures 12%, forest and woodland 40%, other 32%

Major crops: Coffee, sugarcane, bananas, corn, beans, cardamom

Livestock sector: Beef cattle, poultry, hogs

Leading agricultural exports: Coffee, sugar, bananas, processed foods, cardamom, cotton, beef

Leading agricultural imports: Prepared food, wheat, feed grains, dairy products, vegetable oils

Agricultural imports as a share of total imports: 12%

U.S. share of total agricultural imports: 47%

Percent of labor force in agriculture: 60%

Membership in economic or trade organizations: CACM, CBI, IBRD, ICO, IDB, IMF, FAO, GATT, OAS, SELA

Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production¹		
Cardamom	7.5	³
Coffee ²	3,472.0	3,282.0
Corn	1,200.0	1,274.0
Rubber	15.4	17.8
Sesame seed	21.7	28.9
Sugar	875.0	1,015.0
Wheat	34.0	23.0

	<i>mil. head</i>	
Livestock numbers		
Cattle, beef	2.3	2.1
Hogs	1.6	1.6

¹ Production years are: July-June for corn, rubber, and sesame seed; Sept.-Aug. for cardamom; Oct.-Sept. for coffee; Nov.-Oct. for sugar; and Dec.-Nov. for wheat.

² Million 60-kilogram bags.

³ Not available.

coast, alternative crops have become economically competitive, and international cardamom prices have decreased due to reduced demand in the Middle East.

The poultry sector continues to be one of the strongest performing industries in Guatemala. Recent growth has contributed to increased imports of corn and protein meal. Poultry meat is playing an increasingly important role in

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Animal feed ingredients ²	5.9	77
Beverages	4.3	8
Dairy products and eggs	20.4	9
Essential oils	15.5	58
Flour and other grain products	6.8	26
Grains ³	24.9	87
Prepared foods ⁴	35.4	34
Tallow	10.6	100
Vegetable oils	20.3	12
Wheat	29.2	100
All agricultural products⁵	202.5	47

¹ Values are shown in U.S. dollars at U.S.\$1=4.50 quetzales. Includes commercial and concessional imports.

² Excludes grains.

³ Excludes wheat.

⁴ Includes processed fruits, vegetables, meat, seafood.

⁵ Includes products not listed.

the Guatemalan diet as it has become the popular meat of choice.

Farm and food policy

In 1991, the Government reduced inflation to 10 percent, stabilized the exchange rate, dramatically increased foreign exchange reserves, and eliminated price controls on many agricultural goods. These policies have provided the framework for increased investment in agriculture and increased agricultural trade.

Tax advantages are still granted to the poultry industry and to agricultural cooperatives. The nontraditional export sector (fruits, vegetables, flowers, etc.) continues to be exempt from import duties on production inputs. Local wheat producers remain protected. Local wheat millers have to purchase local wheat at established prices (usually well above international prices) in order to receive import permits.

Trade trends

Guatemala is a net exporter of agricultural commodities. In 1990, Guatemala exported \$885 million of agricultural products and imported only \$203 million. Agricultural exports to the United States registered \$400 million compared to U.S. imports of \$96 million during the same period. The United States remains Guatemala's most important trading partner.

Agricultural trade is very important to Guatemala's economy. In 1990, agricultural exports represented more than 75 percent of Guatemala's total export value and were the primary source of foreign exchange.

Coffee is by far the most important export crop. Coffee represented more than a third of agricultural exports in 1990, less than in years past. Coffee export values have been decreasing. Although export volume has increased, it did not totally compensate for lower world prices.

Sugar exports, unlike coffee, have consistently increased during the past several years. Increased export volume, higher international prices, and improved export opportunities to the United States have contributed to this upward trend. Export earnings in 1990 were more than double the 1986 level.

Bananas have consistently been a important source of foreign exchange for Guatemala. Over the past 5 years export earnings from bananas have remained stagnant at between \$70-\$80 million.

Exports of prepared foods have grown impressively, primarily to members of the Central American Common Market (CACM).

Exports of cardamom and cotton, historically important export crops, have decreased and stagnated, respectively, since 1986. International cardamom prices have declined due to decreased demand in the Middle East. Less cotton has been available for export due to production decreases related to poor prices, increased production costs, and

pest management problems.

The export of nontraditional crops such as vegetables, fruit, and flowers has increased with U.S. assistance.

Guatemala's primary agricultural imports are prepared foods, wheat, feed grains, dairy products, and vegetable oil. While bulk grain imports remain relatively significant, Guatemala is also a small but growing market for high-value products. Wheat and feed grain imports, principally yellow corn, have increased sharply. Local production has failed to keep pace with demand, primarily from the poultry industry.

Trade policy and prospects

Guatemala's agricultural trade policy has been relatively open. Nevertheless, Guatemala is continuing to liberalize its general trade policy and its agriculture trade policy in particular. The Government has liberalized and stabilized the exchange rate, eliminated internal price distortions, and increased foreign exchange holdings. Import tariffs have been reduced and Guatemala has recently become a member of the General Agreement on Tariffs and Trade (GATT). Guatemala has signed a Framework Agreement with the United States under the Enterprise for the Americas Initiative (EAI). This is a first step toward further market liberalization in order to prepare for possible free trade negotiations with the United States.

Guatemala, El Salvador, and Honduras have agreed to integrate their economies. The Governments plan to implement a harmonized variable levy system for select basic grains and to liberalize intra-regional agricultural trade between countries. Intra-regional trade of basic grains and other commodities will no longer be prohibited. Standardized and fixed tariffs will be established for a variety of agricultural products and price controls will be eliminated once the variable levy mechanism and other liberalization actions have been implemented. ■

Honduras

Profile of agriculture

Agriculture is the mainstay of Honduras' economic activity. Representing a quarter of the country's gross domestic product, agriculture offers the single largest contribution of any sector. Agricultural operations also provide employment for nearly half of the country's work force and generate about three-quarters of export earnings.

Agricultural activities are carried out primarily by small producers with limited technology who are engaged in subsistence farming. The average farm size is 11.2 hectares. Large commercial plantations of bananas, sugarcane, and African palm constitute the major exceptions to this rule.

Less than 20 percent of total area under cultivation is irrigated, and fertilizer use is only prevalent among medium- and large-scale farmers. As might be expected, productivity is generally low and largely dependent on rainfall.

Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production ¹		
Bananas ²	59.3	54.9
Coffee ³	1.9	1.7
Corn	510.0	557.9
Palm oil	71.5	72.7
Lumber ⁴	168.6	139.1
Sugarcane	198.7	185.7
	<i>mil. head</i>	
Livestock numbers		
Cattle, beef and dairy	2.3	2.3
Hogs	0.7	0.7

¹ Production years are Jan.-Dec. for bananas; Oct.-Sept. for coffee; July-June for corn; Jan.-Dec. for palm oil; Jan.-Dec. for sawnwood; Sept.-Aug. for sugarcane.

² Million 40-pound boxes.

³ Million 60-kilogram bags.

⁴ Million board feet.

The northern coastal plains of Honduras serve as the center for banana, sugarcane, palm oil, and fruit production. The more mountainous western, central, and eastern regions are used mainly for coffee, lumber, grain, and livestock production. The southern region of the country has relatively high concentrations of livestock, sugarcane, sorghum, and melon production.

Production of grains and other basic foods has stagnated for many years while population continues to increase at an annual rate of 2.9 percent. The resulting shortage of basic staples has created a growing dependency on food aid and commercial imports of such commodities as wheat, corn, and dry milk.

Production trends

Farmers continue to struggle to adapt to changing macroeconomic and sectoral conditions brought about by Government reforms during 1990 and 1991. The transition is proving slow, but some crops are beginning to show signs of increased production.

Motivated by healthy export prospects in recent years and the diffusion of progressive improvements in agronomical practices, coffee production area continues to increase. In fact, coffee production reached its highest levels during 1989-1991.

Production and exports of bananas have remained relatively constant in recent years. Labor disputes, land tenure restrictions, and weather anomalies have prevented banana growers from expanding production. However, the Government hopes to spur production and encourage banana company investment over the next few years in order to generate a significant expansion of the export market for this crop.

Between 80,000 and 90,000 hectares of forest are depleted annually. This alarming rate of deforestation is the result of poor management, a high incidence of forest fires, prevailing "slash and burn" farming techniques, and



Honduras at a Glance

Population (1991): 4.8 million

Urban population: 40%

Population growth rate: 2.9%

Per capita income (1991): \$512

Land use: Crops 16%, meadows and pastures 30%, forest and woodland 34%, other 20%

Major crops: Coffee, bananas, wood, corn, cultivated shrimp, sugarcane, palm oil

Livestock sector: Beef and dairy cattle, poultry, aquaculture, swine

Leading agricultural exports: Bananas, coffee, beef, cultivated shrimp, wood, fresh fruits (excluding bananas), sugar

Leading agricultural imports: Beverage bases, wheat, dairy products, prepared foods, corn, soybean meal, malt

Agricultural imports as a share of total imports: 10%

U.S. share of total agricultural imports: 60%

Percent of labor force in agriculture: 47%

Membership in economic or trade organizations: CACM, IBRD, ICO, IDA, IDB, IFAD, IFC, IMF, ISO, OAS, ODECA, SELA

inefficient use of standing timber. As a result of these factors, production and export of lumber was sharply reduced in recent years.

Particularly during the 1980's, grain production stagnated while demand increased rapidly, prompting the need for sizable imports. However, largely in response to higher grain prices since

Value of Agricultural Imports, 1990¹

	Total imports \$ mil. ²	U.S. share %
Selected products		
Dairy products	13.4	
Dry beans	1.1	99
Fruit juices	1.0	73
Fruits and nuts	1.6	76
Grains		
Corn	7.7	100
Rice	2.1	51
Wheat	13.6	97
Malt	2.6	23
Planting seeds	2.0	67
Prepared foods	10.8	28
Prep. for mfg. beverages	14.0	94
Soybean meal	7.5	100
Tallow	0.7	100
Tobacco, leaf	2.4	78
Vegetable oils	2.4	91
All agricultural products³	107.4	60

¹ Data include commercial and concessional imports.

² Values are shown in U.S. dollars. Weighted average of official exchange rate during 1990 was U.S.\$1=4.05 Lempiras.

³ Includes products not listed.

1990, both the amount of area planted and the production of grains have increased. While still considerably short of demand, the 558,000 metric tons of corn produced during the 1990/91 marketing year (July/June) marked a record-high crop.

Aquaculture is one of the fastest growing and most promising agricultural industries in Honduras today. In only a few years, Honduras has become the second largest exporter of cultivated shrimp in Latin America, with 1991 exports of approximately 4,500 metric tons of tail worth about \$25 million. With considerable investment in the sector and only about 30 percent of land suitable for shrimp farming currently in

use, production and exports are expected to continue to rise in the near future.

Farm and food policy

For many years, the Government maintained low retail prices of basic food items and general consumer goods. This policy helped keep inflation in check, but did so at the expense of farmers' income. Prices for almost all agricultural commodities at the farm level remained depressed for the past 2 decades which, in turn, caused farm output to stagnate. Government efforts to provide price guarantees for grain farmers met with little success since the Government's participation in domestic grain marketing was small.

Recognizing the economic inefficiencies and distortions created by such policies, the Government began to liberalize agricultural prices and reduce its intervention in 1990. Producer price supports have been eliminated, and currently only four commodities remain subject to consumer price controls: sugar, coffee, vegetable shortening, and corn starch. This price deregulation drove producer prices of virtually all farm products upward, which has in turn boosted farm output.

Trade trends

Even though Honduras is a net importing country, its agricultural sector boasts a positive trade balance of \$565 million. During 1990, agricultural exports totaled \$672 million (73 percent of all exports), while agricultural imports amounted to \$107 million (10 percent of all imports).

Historically, Honduras has relied heavily on exports of traditional agricultural products as its main source of foreign exchange. Banana and coffee still account for 90 percent of the earnings from traditional agricultural exports and for 60 percent of total export earnings. Banana exports have remained relatively flat in recent years,

while coffee export volume has increased because of greater production and the lack of International Coffee Organization (ICO) quotas.

Other leading traditional agricultural exports include beef, lumber, and sugar. Unfortunately, low market prices, an increasingly overvalued currency during the late 1980's, and other constraints led to a steady decline in exports of these and other commodities. With the exception of exports of cultivated shrimp and melons, export activity of nontraditional products has been sluggish.

In terms of agricultural trade, the United States remains Honduras' chief trading partner, purchasing 41 percent (\$277 million) of its exports and supplying 60 percent (\$64 million) of its imports.

Trade policy and prospects

Beginning in early 1990 the Government began to make a transition from highly protectionist policies toward trade liberalization. Besides simplifying the import process, the Government has lowered import duties to a maximum of 20 percent.

Honduras has also entered into agreements with its Central American neighbors to liberalize trade in the region and to standardize fixed and maximum tariffs for white corn, black beans, liquid and powdered milk, live cattle, beef, pork, chicken meat, live chickens, and eggs.

Honduras is in the process of implementing a price-band mechanism for yellow corn, rice, sorghum, and soybeans. The price-band is expected to facilitate imports and stabilize prices for these commodities. According to these regional agreements, complete liberalization will occur by December 1992.

Actions taken by the Government so far have allowed Honduras to apply for General Agreement on Tariffs and Trade (GATT) membership. ■

Hong Kong

Profile of agriculture

The territory of Hong Kong includes the original Hong Kong island and adjacent islands, and Kowloon and the New Territories on the mainland of China. The terrain is mostly too hilly to be cultivated. Crop cultivation is confined to narrow valleys and alluvial lowlands. Nearly 6 million people are crowded into the territory.

Hong Kong has a very small agricultural base: Less than a tenth of the land area is devoted to farming, and only 1.5 percent of the labor force is engaged in agriculture and fisheries. Agriculture's contribution to the gross domestic product is less than 1 percent, and the industry is declining as a result of high rents, a labor shortage, and increasingly restrictive pollution controls.

Nevertheless, Hong Kong's per capita consumption of protein is one of the world's highest. Local producers can satisfy only a small portion of the demand for foodstuffs—notably fresh and perishable foods including poultry, vegetables, pork, and fish—but most of Hong Kong's food and agricultural product needs are met by imports.

Production trends

Pork and poultry production are expected to decline in 1990 as more farms close. Output of poultry meat is

estimated at 32,000 metric tons. Local farmers raise broilers, pigeons, ducks, and quail. Hog numbers were estimated at 314,000 head in 1991. The industry has been under great pressure from the Waste Disposal (Livestock Waste) Bill, which bans livestock production in urban areas and imposes stricter pollution controls on farms in the rural New Territories. Locally produced poultry and pork generally command higher prices than imported live and frozen products, as 95 percent of the population are Chinese who prefer fresh food.

Farm and food policy

Compared with other industries in Hong Kong, the food manufacturing sector is small, with only about 930 establishments. The gross output of this sector is estimated as \$850 million, of which about 20 percent is exported.

Major items produced in Hong Kong include instant noodles, macaroni, spaghetti, bread, biscuits, pastries, and cakes, with practically all ingredients imported from overseas suppliers. Manufactured dairy products include milk, cream, and yogurt. Other processed foods are soy sauce, oyster sauce, shrimp paste, gourmet powder, frozen dim sum, and canned and preserved items.

Rapidly shifting lifestyles have changed Hong Kong's retail food market tremendously in recent years. New supermarkets, fast-food outlets, and other food businesses are quickly replacing traditional street corner groceries, food stores, and small tea houses and restaurants. People 35 years and younger (56 percent of the population) show a definite preference for these new establishments.

A special characteristic of Hong Kong is that more than half of all meals are consumed in restaurants. In part,



Hong Kong at a Glance

Population (1991): 5.9 million
Urban population: 95%
Population growth rate: 0.6%
Per capita income (1991): \$12,000
Land use: Crops 8%, meadows and pastures 1%, forest and woodland 12%, other 79%
Major crops: Vegetables
Livestock sector: Poultry, hogs
Leading agricultural exports: Shrimp, fish
Leading agricultural imports: Fruits, vegetables, cotton, alcoholic beverages, fish, meat, dairy products, cereals, processed foods
Agricultural imports as a share of total imports: 10%
U.S. share of total agricultural imports: 17%
Percent of labor force in agriculture: 1.5%
Membership in economic or trade organizations: GATT

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Vegetables	141	105
	<i>thous. head</i>	
Livestock numbers		
Hogs	413	314
Poultry		
Chickens	14,025	13,082
Pigeons	5,548	3,978
Ducks	2,690	2,131

people prefer to leave elaborate cooking to restaurant chefs because their homes are typically small and too hot to cook in comfortably. Family gatherings are held in restaurants rather than at home. Hotels are the centers of high society and hotel chefs and food and beverage managers are leaders in the local food industry. Tourism supplies approximately 5 million extra consumers per year.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Beef	104	13
Brandy	250	²
Cotton	319	21
Fruits	490	40
Ginseng	229	37
Hogs	203	2/
Poultry, frozen	19	49
Prawns/shrimp	283	1
Rice	143	1
All agricultural products³	7,400	17

¹ Values are in U.S. dollars at U.S.\$1=7.80 Hong Kong dollars.

² Less than 0.5%.

³ Includes forest products, cigarettes, and other products not listed.

Trade trends

Hong Kong imports an estimated \$6 to \$7 billion worth of agricultural products each year. China is the largest supplier of agricultural products, accounting for about 40 percent of the total. The United States is second with a 17-percent share, worth about \$1.2 billion.

Fruits and vegetables made up the largest import category, equivalent to about a quarter of the import total, closely followed by fish and fishery products. Other major food imports include meat, dairy products, cereals, and other processed food products.

Hong Kong imported over \$850 million worth of fresh fruits and vegetables in 1991. Citrus fruits, which used to account for about 40 percent of fruit imports, contributed only about 30

percent of the total. This decline is mainly the result of the reduced supply of oranges from California. Although the United States remains the largest citrus supplier, its market share dropped from 85 percent to only 55 percent in 1991 for the same reason. Noncitrus imports consist chiefly of apples, grapes, pears, bananas, berries, and stonefruit.

China is the largest supplier of traditional Chinese vegetables. Hong Kong also imports a wide variety of vegetables from Australia, Thailand, and the United States. The most popular produce are cabbages, beans, melons, lettuce, tomatoes, and potatoes.

Hong Kong has a seafood-loving populace and imported more than \$100 million worth of seafood in 1991, including prawns, shrimp, sharkfin, and abalone. Local fishermen also supply a significant number of fish, prawns, and shrimp to the domestic market. Prawns and shrimp are Hong Kong's most important agricultural exports.

The New Territories import live animals and poultry, as well as frozen meats to satisfy the domestic poultry and meat market. Live pigs, cattle, chickens, and other poultry are imported from mainland China for the fresh meat market. Frozen meats have gained increasing acceptance over the past decade, with the growing number of working women. Unlike the traditional Chinese housewife, who frequents the market every day, modern housewives keep meats in the refrigerator, thus reducing the difference in freshness between fresh and frozen meats. In most cases, frozen products are sold at prices 20 to 30 percent below those of freshly slaughtered meats.

The rapidly expanding fast food business is also an important consumer of U.S. frozen poultry. Quality imports are popular at the upper end of the market catering to tourists, business

entertaining, expatriates, and high-income families. Here U.S. beef finds its market.

Trade policy and prospects

Hong Kong is virtually an open market. There are no import tariffs, but revenue duties are assessed on tobacco (including cigarettes), alcoholic beverages, and soft drinks—both imported and domestic. Regulations pertaining to food safety and health standards have generally not posed problems for U.S. food exports. All imported (and domestic) prepackaged food is subject to labeling regulations. Imported shipments of unprocessed meats and poultry require valid inspection certificates.

In 1997 Hong Kong will be transferred from British to Chinese control. Ultimately, Hong Kong's economic performance will be determined by how smoothly this transfer proceeds. China has pledged to preserve Hong Kong's capitalist system and to grant Hong Kong a high degree of autonomy. Conceivably, the relationship exporting countries currently enjoy with Hong Kong could give those countries a foot in the door of the Chinese market (with over 1 billion consumers) once the transfer takes place.

For the present, Hong Kong already plays a role in the economy of China, albeit a small one. Hong Kong companies supply Western hotels in China with many high-value food products.

For the foreseeable future, Hong Kong will continue to play a role in agricultural development in China. This will allow import demand for high-value products to continue to grow until China develops its own food industry and can produce the higher quality foods for which its people are developing tastes. ■

Hungary

Profile of agriculture

Agriculture plays an important role in Hungary's overall economy, contributing about 20 percent to the gross domestic product.

About half of agricultural production comes from cooperatives, 14 to 15

Agricultural Production

	1989	1990
	thous. metric tons	

Crop production

Apples	959	945
Barley	1,340	1,359
Corn	6,996	4,322
Grapes	580	760
Potatoes	1,332	1,226
Rapeseed	98	106
Sugar beets	5,301	4,674
Sunflowerseed	699	677
Vegetable	1,993	1,938
Wheat	6,540	6,159

thous. head

Livestock numbers

Cattle	1,598	1,571
Dairy	570	598
Hogs	7,660	8,000
Poultry		
Broilers	18,461	15,211
Layers	25,992	25,171
Ducks	1,785	3,100
Geese	1,492	835
Turkeys	767	640
Sheep	2,069	1,865

thous. metric tons

Animal product output

Beef and veal ¹	278	253
Butter	38	38
Cheese	55	64
Eggs ²	4,576	4,440
Milk	2,698	2,685
Pork ¹	1,317	1,251
Poultry meat ¹	580	578
Sheep meat and lamb ¹	44	44

¹ Slaughter animal in live weight.

² Million eggs.

percent from state farms, and the rest (35 to 36 percent) from small-scale private farms, including many part-time farms. The importance of the different sectors varies by commodity. The role of private farms is expected to grow.

The average size of the 1,250 agricultural cooperatives is about 4,200 hectares, while the 130 state farms average 7,300 hectares each. As a result of recent agriculture property reform and the problems in managing large-scale agricultural operations, many of the huge socialized farms may be split into smaller units.

The average area of the more than 150,000 private full- and part-time farms is less than 1 hectare. These small farms work closely with agricultural cooperatives or other commercial organizations. Because private farms do not have enough crop area and machinery, they purchase much of their feed, and rent equipment for land cultivation and transportation from cooperatives or commercial sources.

Production trends

According to preliminary estimates, total agricultural output showed slight increases in 1991. Crop production increased 10 percent, principally as the result of good grain and sunflower crops. At the same time, animal production decreased by about 8 percent. The 1991 grain crop of 15.4 million metric tons was sufficient to meet overall demands. It is very rare, under Hungarian climatic conditions, that both the wheat (5.9 million tons) and corn (7.5 million tons) crops are outstanding in the same year.

Oilseed production increased in 1991, led by a 22-percent rise in the sunflowerseed crop to 684,000 tons. The sunflowerseed crop was insufficient to fully supply Hungary's crushing capacity.

Beginning in 1990, declining market opportunities for wine and vegetable preserves in East European countries kept the production of horticultural crops low in 1991. Fruit crops were not



Hungary at a Glance

Population (1991): 10.3 million

Urban population: 62%

Population growth rate: 0.2%

Per capita income: (1990): \$2,198

Land use: Crops 57%, meadows and pastures 14%, forest and woodland 18%, other 11%

Major crops: Grains, oilseeds, fruits, vegetables, wine grapes

Livestock sector: Hogs, poultry, dairy and beef cattle

Leading agricultural exports: Pork and canned meat, poultry, wheat, wine, canned vegetables, canned fruits, live cattle, live sheep, apples, fruit juices, sausages and salami

Leading agricultural imports: Soybean meal, forest products, cotton, coffee, tropical fruits, hides

Agricultural imports as a share of total imports: 9%

U.S. share of total agricultural imports: 5%

Percent of labor force in agriculture: 19%

Membership in economic or trade organizations: CCC, EC (associate member), FAO, GATT, IDA, IMF, ISO, UNCTAD

large in 1991. Consequently, Hungary could only partly meet the increased weather-induced West European fruit demand.

The major livestock production sectors were again weak in 1991. Depressed international and domestic markets held prices down, while input costs grew by more than the 37 percent

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Animal origin meals ²	34	0
Cocoa	16	0
Coffee	42	0
Corn	26	92
Cotton	47	12
Forest products	105	³
Hides	16	4
Soybean meal	163	⁴
Tropical fruits	37	⁴
All agricultural products⁵	822	5

¹ Values are shown in U.S. dollars at U.S.\$1=63.20 Hungarian forints.

² Includes fish, bone feather, and meat meal products.

³ Negligible.

⁴ Not available.

⁵ Includes products not listed.

inflation rate. The combination of a good feed grain harvest and a Government-supported summer pork sellout allowed hog production to expand in late 1991. The Government's dairy herd reduction program resulted in a 7- to 10-percent decline in milk output in 1991.

Poultry production is weak but sufficient to meet demand. However, table egg output dropped to such a low level that some unexpected imports were needed at the end of the year.

Farm and food policy

Hungary's agricultural policy has three aims: to help with the transformation from a socialist to a market economy, spur land reform, and continue an export orientation for several commodities.

Producer prices for most agricultural products are now set by market forces rather than the Government. At the same time, consumer prices have been liberalized and extensive consumer subsidies have been eliminated. A

declining standard of living and rising food prices have reduced domestic food sales.

Although some prices at the farm level have risen, prices of industrial and imported inputs have increased even more. The Government has lowered producer subsidies because of budget constraints; meanwhile the repeated devaluation of the Hungarian currency has made imported inputs more expensive.

A major unanswered question about the future of Hungarian agricultural policy concerns the privatization of state-owned agribusiness firms and the reform of the important cooperative sector. New legislation governing these changes has been partly approved by the Hungarian parliament. But the legal process that will fundamentally affect property relations of Hungarian agriculture is not yet in effect. This uncertainty, coupled with large surpluses, weak domestic and foreign demand, high interest rates, poor cash flows, and other problems, hampers the making of important production decisions. The situation is further complicated by the lack of a viable market for agricultural land.

Trade trends

Hungary is the only East European country that has become a net exporter of a wide range of agricultural products. Sales in 1990 totaled \$2.4 billion (including forest products) and are estimated to have reached \$2.5 billion in 1991. These agricultural and food industry exports are essential to the national economy; they account for 22 to 25 percent of total exports.

Conversely, the country's debt and limited foreign currency reserves help keep agricultural imports low. The total in 1990 was \$822 million.

Hungary's traditional agricultural export commodities include live animals, meat, poultry, grains, wine, and horticultural products. The most important

markets are the European Community (EC) (particularly Germany, Italy, and France); neighboring countries (Yugoslavia and Austria); and the former Soviet Union and other East European countries (Czechoslovakia and Poland).

Since 1990, this traditional set of destinations has been altered by changes in the political, financial, and trade relationships between the old and new states of Eastern Europe. Hungary's new EC associate membership is helping to expand its access to West European markets.

The United States is usually Hungary's eighth or ninth largest agricultural export market, taking approximately 3 percent of the total.

Of the \$822 million in Hungarian agricultural imports in 1990, about 5 percent came from the United States. After years of decline to the 1989 low of \$18 million, U.S. agricultural exports to Hungary totaled \$42 million in 1990.

This increase was primarily due to an expansion in drought-induced feed grain imports. Annual variations of other commodities—rice, hides, almonds, cigarettes—usually offset each other.

Trade policy and prospects

Although the Government encourages agricultural exports by means of export development credit programs and export subsidies, Hungary supports a market-oriented position in the Uruguay Round. Recent reductions in export subsidies came as a result of budget constraints rather than trade policy.

The partial liberalization of foreign trade in Hungary has slowed the downturn in its imports. At the same time, weak activity in light industry sectors (leather/textiles) reduced Hungary's demands for the import of raw materials. Import quotas on consumer goods and decreased domestic market demand are limiting the variety of goods in stores. ■

Profile of agriculture

Agriculture provides the livelihood for over 70 percent of India's 851 million people. It accounts for 32 percent of the country's gross national product, down from 45 percent 20 years ago. Farm size is generally small; most holdings are less than 1 hectare.

Average yields and input use are low, except for a few highly irrigated surplus production areas. Output fluctuates widely, depending on monsoon rainfall which is especially vital to the fall-harvested "kharif" crops. Rice, coarse

grains, peanuts, cotton, and soybeans are the major kharif crops. Wheat and rapeseed are the major spring-harvested "rabi" season crops. Most sugarcane is harvested in winter and spring between November and June.

Food grains and pulse crops account for two-thirds of agricultural production. Increases in cereal production have been achieved through improved irrigation, greater use of high-yielding variety seeds, better availability of fertilizers and agricultural chemicals, and improved agronomic practices. India is the world's largest producer of sugarcane, tea, peanuts, and pulses. Food output has increased at an average rate slightly greater than that of the population during the past 4 decades.

The rapid depletion of forest resources is of growing concern in India. Per capita forest reserves are already very small. Wood supplies two-thirds of rural energy needs. In addition, industries need raw inputs for packaging, paper, and housing.

Production trends

After a promising start, 1991 summer monsoon rains trailed off over much of the subcontinent by late August, reducing yields for many major crops. Total Indian farm output growth will be negligible for the 1991/92 fiscal year as a result, demonstrating that the agricultural sector remains vulnerable to annual weather fluctuations. Food grain and pulse output is not expected to reach the 1990/91 level of 176 million tons. Rice production is expected to be down by 3.6 million tons, and wheat may be lower by 2 million tons.

India continues to strive for self-sufficiency in oilseed production, but in 1991 suffered its second poor year for peanut production in the north. This poor harvest was partially compensated for by increased southern peanut production. Soybean production, which had been increasing rapidly, declined slightly as a result of unfavorable



India at a Glance

Population (1991): 851 million

Urban population: 25%

Population growth rate: 2.01%

Per capita income (1991): \$270

Land use: Crops 56%, meadows and pasture 4%, forest and woodland 23%, other 17%

Major crops: Rice, wheat, coarse grains, pulses, peanuts, rapeseed, sugarcane, cotton, tobacco, tea, coffee, jute, spices, potatoes

Livestock sector: Cattle, buffalo, sheep, goats, poultry

Leading agricultural exports: Tea, cotton, oilseed meals, cashews, rice, fruits, vegetables, tobacco, coffee, spices

Leading agricultural imports: Pulses, edible oils, wool, cashew nuts, rice, wheat and other cereals

Agricultural imports as a share of total imports: 3%

U.S. share of total agricultural imports: 14%

Percent of population in agriculture: 70%

Membership in economic or trade organizations: FAO, GATT, IBRD, SAARC

weather. However, rapeseed and sunflowerseed output is expanding rapidly. Cotton yields were also down in 1991, as this crop remains highly dependent on monsoon rains. Production is expected to be around the 1990/91 level of 11.8 million bales.

Growth in the livestock sector is hampered by inadequate feed and fodder supplies. The rapid growth seen in the poultry sector in the 1980's has slowed as

Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production¹		
Coarse grains	34.8	33.1
Cotton ²	13.3	11.8
Peanuts	8.1	7.6
Pulses	12.6	14.0
Rapeseed	4.1	5.2
Rice	73.6	74.6
Soybeans	1.8	2.4
Sugarcane	222.6	234.7
Tea ³	684.1	714.6
Wheat	49.8	54.5

	<i>mil. head</i>	
Livestock numbers⁴		
Buffalo	74	75
Cattle	194	197
Goats	108	110
Sheep	46	47

	<i>thous. metric tons</i>	
Animal product output		
Eggs ⁵	21,420	23,320
Milk	51,500	53,500
Poultry meat	289	334
Sheep and goat meat	560	570
Wool	43	44

¹ Crop years vary by commodity.

² Million 170 kg. bales.

³ Thousand metric tons.

⁴ Calendar year.

⁵ Million eggs.

Value of Agricultural Imports, 1990/91¹

	Total imports \$ mil. ²	U.S. share %
Selected products		
Cashew nuts, raw	73.8	-
Edible oils	179.6	12
Fruits and nuts	60.0	38
Milk and cream	1.9	-
Other cereals	48.6	98
Pulses	263.8	5
Rice	21.8	-
Sugar	5.3	-
Wheat	13.5	22
Wool, raw	100.2	1
All agricultural products³	825.7	11

¹ July-June.

² Values are in U.S. dollars at U.S.\$1=17.94 Indian rupees.

³ Includes products not listed.

prices for feed ingredients, especially corn, have soared.

India has a huge and extremely diverse horticultural sector, producing mainly fresh fruits and vegetables for domestic consumption. Food processing industries are rapidly expanding, but are hindered by an inadequate infrastructure and the weak buying power of most consumers.

Farm and food policy

The major goals of Indian agricultural policy continue to be self-sufficiency in provision of adequate food supplies, at prices which are affordable to low-income consumers.

The Government annually announces minimum purchase (procurement) prices for major crops, but only resorts to substantial Government market intervention in the cases of wheat and rice. Farmers receive fertilizer and electricity for irrigation at subsidized rates, and forgiveness of rural loans has been common. However, input subsidy

programs may be cut back significantly for budgetary reasons in 1992.

The Government distributes basic food commodities through the Public Distribution System (PDS), which comprises a network of 350,000 "fair price shops" monitored by the state Governments.

Between 15 to 20 million tons of wheat and rice are distributed through the PDS annually, or about 10 percent of total supplies. Government wheat and rice stock holding serves a dual purpose, providing a price support and the commodities for release to the PDS and containing open market prices. Sugar marketing, both through the PDS and in the open market, is controlled by the Government as well. When Government-controlled stockpiles for these three key commodities fall because of inadequate domestic procurement or higher offtake, the Government may import to rebuild supplies.

Trade trends

India is a net agricultural exporter with sales of \$2.8 billion in 1990/91 more than offsetting imports of \$825 million.

India maintains a precarious balance in food grain self-sufficiency, shifting from imports to exports every few years. Rice exports increased in 1991 because *rupee* devaluation made Indian export prices competitive and supplies were good. Wheat exports picked up in the summer and fall of 1991, but were stopped early in 1992 as the domestic supply situation became tight. In fact, by mid-1992 India had imported 1 million tons of wheat. Similarly, after 2 years of substantial cotton exports, only small quantities of low-grade cotton were exported from the 1991 crop.

Exports of oilseed meals continue to increase, with the direction of trade shifting to European and Asian markets which pay with hard currency, rather than to the republics of the former Soviet Union. India's exports of coffee, tea, and leather have also dropped as the former

Soviet Union was the major purchaser of these items through a *rupee-rouble* trade agreement. New trading relations are being established with republics of the former Soviet Union, but export quantities will probably not return to former levels for several years.

Trade policy and prospects

The summer of 1991 saw major reforms in Indian trade policy as the Government grappled with a severe foreign-exchange crunch. The *rupee* was devalued, licensing requirements were simplified, export subsidy programs were cut back, and a step was taken toward *rupee* convertibility with a system of import entitlements earned on hard currency imports. The spring of 1992 saw further policy reforms, when the *rupee* was made 60-percent convertible at market rates.

The Government allowed the prices of several commodities, particularly edible oil, to rise rather than use scarce foreign exchange for imports. As the foreign exchange situation has eased, thanks to increased lending by IMF and the World Bank, imports have picked up, but trade of major farm commodities is still strictly controlled by licensing, Government-sanctioned monopolies, and outright bans on trade. Import tariffs have been reduced, but still exceed 100 percent for most commodities.

Pulses are the only major farm commodity that can be imported freely by private traders, subject to a 10-percent duty. Almonds can also be freely imported now, subject to set duties. Many agricultural product processing companies would like to import directly, but so far only export-oriented units, such as cotton mills, may import raw products and these must be linked to finished product exports.

Although many exports, such as rice and oilmeals, are handled by private traders, most are regulated—through quotas or minimum export prices—to assure adequacy of domestic supplies. ■

Indonesia

Profile of agriculture

Indonesia is the fourth most populous country in the world. About 70 percent of the population is rural. This percentage is expected to fall in coming years as Java (about 60 percent of population) becomes increasingly urbanized.

Agriculture accounts for nearly 21 percent of the gross domestic product in Indonesia and employs about half the country's labor force. Rural land ownership averages about 0.6 hectare per family and farming activities are very labor intensive. Production techniques, particularly the cultural practices for rice, in some cases involve a high level of technology but usually lack mechanization. A high percentage of food crops is consumed on or near the production site, and many rural families live near the subsistence level.

Rice is the most important food crop in Indonesia, with per capita availabilities of about 155 kilograms per year.

Agricultural Production

	1989/90	1990/91 ¹
	thous. metric tons	
Crop production		
Cassava	15.50	17.00
Coconut oil ¹	0.75	0.74
Copra ¹	1.27	1.25
Corn	5.20	5.00
Palm oil	2.25	2.80
Peanuts ¹	0.89	0.92
Rice (milled basis) ¹	29.40	28.70
Soybean meal	0.18	0.13
Soybeans	1.32	1.29
Sugar	2.12	2.05
Tea	0.16	0.15

	thous. head	
	1989	1990 ¹
Livestock numbers		
Cattle, dairy	250	250
Hogs	7,050	7,065
Sheep	5,870	5,900

¹ Estimate.

Other important food crops include corn, soybeans, cassava, and peanuts. Indonesia is also a leading producer of plantation crops such as rubber, palm and coconut oil, cocoa, sugarcane, copra, coffee, and spices. Most of these products are shipped in bulk form without further processing. Indonesia is a giant producer of forest products, especially plywood for export.

Exports of fish, especially shrimp and canned tuna, are growing. Deregulation over the past few years has spurred growth in the domestic poultry industry, which is beginning to find export markets for its products. Beef, swine, and dairy products round out the list of important agricultural items.

Production trends

While greater use of modern methods and inputs boosted rice production in the early 1980's, the rate of increase has slowed. The country is now self-sufficient in rice, but a continuing loss of irrigated land to urban development, especially on Java, where 60 percent of the country's rice is produced, could reverse this trend. (Java has 24 percent of the arable land.) Over 90 percent of the rice produced in Indonesia is irrigated by means of a terracing system developed over centuries and supplied by canals developed over the past 30 years.

Corn production is on a gradual upturn as a result of increased demand from the feed industry. Corn is planted largely as a secondary crop in the dry season, after the main rice crop, but because of delayed rains in 1991, it was the primary crop. About half of domestic corn production is consumed directly by humans.

The estate crop sector is extremely important to the country both as a source of employment and a foreign exchange earner. Oil palm is now one of the most dynamic and rapidly expanding estate crops in Indonesia. In just a few years the industry has moved from



Indonesia at a Glance

Population (1991): 194 million

Urban population: 30%

Population growth rate: 1.8%

Per capita income (1991): \$490

Land use: Crops 11%, meadows and pastures 7%, forest and woodland 67%, other 15%

Major crops: Rice, corn, soybeans, cassava, peanuts, palm oil, coconut oil

Livestock sector: Poultry, hogs

Leading agricultural exports: Rubber, wood products, fisheries, spices, vegetable oil, coffee

Leading agricultural imports: Cotton, wheat, soybeans

Agricultural imports as a share of total imports: 7%

U.S. share of total agricultural imports: 17%

Percent of population in agriculture: 52%
Membership in economic or trade organizations: ASEAN, FAO, GATT, IFAD

mostly Government-held plantations to an increased number of privatized firms with an export focus. Palm oil exports, which totaled 1.2 million metric tons in 1991, will continue to grow.

Indonesia is also a major producer of copra, coconut oil, and cocoa. Exports of cocoa have more than tripled over the past 5 years because of an aggressive planting campaign of bulk cocoa.

Forest products, led by plywood, are an extremely important foreign exchange earner, accounting for \$3.3 billion, about 46 percent of total agricultural sector earnings in 1990.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Cotton	485.0	37
Wheat	281.9	14
Oilseeds	172.3	10
Vegetable oils	12.2	2
Others	871.6	8
All agricultural products ²	1,823.0	17

¹ Values are shown in U.S. dollars at U.S.\$1=1,869 rupiahs.

² Includes all products.

Production capacity went from 8.9 million cubic meters in 1988 to about 9.8 million cubic meters in 1989. Because of environmental priorities, the Government will not allow additional plywood mills to be opened unless they are located in comparatively less-developed eastern Indonesia. Furthermore, it has set a limit on total log production at 32 million cubic meters per year.

The livestock sector continues to grow at a brisk pace, led by poultry. Recent deregulations have encouraged investments in integrated poultry operations and several large feed lots. The dairy sector is stalled at around 250,000 milk cattle, although efforts continue to improve management and genetics in the herd.

Farm and food policy

The Government's program of economic deregulation is crucial to Indonesia's efforts to create employment, improve rural incomes, maintain growth, and increase export earnings. Since 1983, deregulation has introduced substantial liberalization in the economy. The deregulation plan of June 1991

has opened the possibility of substantially lower feed input costs, which are necessary for sustained growth in the poultry industry.

The Government has lessened its dependence on petroleum by increasing non-oil exports, which accounted for 66 percent of the total in 1990, up 16 percent from 1989. The current 5-year development plan, begun in April 1989, proposes to shift the burden of economic development from the Government to the private sector.

To strengthen rice self-sufficiency and broaden demand for other products, the Government encourages production of secondary food crops, such as corn, soybeans, and cassava.

Trade trends

Indonesia enjoys a large agricultural trade surplus; in 1990, exports totaled \$7.2 billion versus imports of \$1.8 billion.

Primary agricultural imports included cotton, wheat, feedstuffs, oilseeds, and sugar. Indonesia imported \$305 million worth of agricultural products from the United States in 1990, up 13 percent from 1989.

The United States continues to capture a large share of Indonesia's expanding cotton market, and is its largest supplier. Dependable quality and regular supply give U.S. cotton the competitive edge. The Indonesian textile industry is growing about 15 percent annually. This growth is fueled by the export trade, but local demand for cotton and cotton-blend garments is on the increase as well.

Wheat imports rose about 4 percent in marketing year 1990/91 (July-June). Wheat products are gaining acceptance as substitutes for rice, in the form of noodles. Major wheat suppliers to Indonesia are Australia, Canada, Saudi Arabia, and Argentina. The U.S. share of the Indonesian wheat market has fallen from 50 percent in the early 1980's

to about 14 percent in 1990, mainly because of lower priced competitor wheat.

The United States supplied about 22 percent of Indonesia's soybean imports during the 1990/91 (October/September) marketing year. Liberalization of soybean meal imports has reduced imports of U.S. soybeans, which now face competition from China, Argentina, and Brazil.

Indonesia's agricultural exports continued to expand in 1990, led by forest products (particularly plywood), rubber, fisheries (mostly shrimp), coffee, vegetable oils (principally palm and coconut products), spices, and tea.

Indonesian agricultural exports to the United States surpassed \$1.2 billion in 1990, a marginal increase from the preceding year's level partly because of lower world prices for Indonesia's natural resource based products. Rubber, wood products, spices, fisheries, vegetable oils, and coffee were the main products sold to the United States.

Palm and palm kernel oil production and exports have steadily increased over the past few years. Shipments are estimated to have reached approximately 1.4 million tons in 1990/91, a dramatic 43 percent increase over the previous year.

Trade policy and prospects

Trade in major commodities either remains under direct Government control (such as wheat, sugar, and soybeans) or is controlled by Government-appointed private companies. Removal of trade restrictions on some items may be approved soon.

Indonesia supports efforts in the General Agreement on Tariffs and Trade (GATT) multilateral trade negotiations to reduce agricultural production and export subsidies, and import barriers. ■

Ireland

Profile of agriculture

Ireland is predominantly low-lying (197-394 feet), with a mild, uniform climate. Fourteen percent of the land is arable, 5 percent is forested, and 71 percent is meadows and pastures.

Until the mid-1950's, the Irish economy was largely agrarian. Over the past two decades the Government has promoted rapid industrialization, using various inducements to attract a significant amount of foreign industrial investment, especially from the United States. Despite increased industrialization, agriculture remains more important

to Ireland's economy than to the economies of most other countries in the European Community (EC).

In 1991 agriculture contributed 7.4 percent to the gross national product, employed 14 percent of the workforce, and provided an estimated 22 percent of total exports.

Roughly 2 percent of the farm population leaves farming each year, with a consequent increase in the average farm size; this population trend is expected to accelerate over the next few years. However, through the processing of primary farm/food products, agriculture indirectly provides opportunities for significant additional employment.

The high rainfall and temperate climate are ideal for grass-fed livestock: only 6 percent of the land is cultivated. Ireland is self-sufficient in most temperate food products and a substantial net exporter of meat and dairy products, which account for 85 percent of agricultural production. The most important crops are malting and feed barley, soft wheat, sugar beets, and potatoes. Ireland must import all tropical products and most hardwoods.

Production trends

Gross agricultural output increased almost 2 percent in volume, but declined 3 percent in overall value in 1991, because of further declines in commodity prices (down nearly 5 percent).

Farm incomes peaked in 1989, but real income has slumped over 20 percent in the past 2 years, despite good weather and increases in the production of most commodities. Production of beef and lamb rose significantly again in 1991, but a cut in the EC's milk quota produced a 2-percent decline in milk output.

A further sharp increase in winter wheat acreage produced moderate growth in grain production. However, prices for most commodities fell again, mainly because of growing European surpluses.



Ireland at a Glance

Population (1991): 3.5 million

Urban population (est.): 37%

Population growth rate: 0.3%

Per capita income (1991 est.): \$6,050

Land use: Crops 14%, meadows and pastures 71%, forest and woodland 5%, other 10%

Major crops: Sugar beets, barley, potatoes, wheat, turnips, oats

Livestock sector: Beef and dairy cattle, sheep, hogs, poultry

Leading agricultural exports: Beef, beverage bases, butter, milk powders, cheese, casein, live cattle, essential oils

Leading agricultural imports: Lumber, corn gluten feed, racehorses, essential oils, wheat, wine, peptones/hide powder, soybean meal

Agricultural imports as a share of total imports: 12%

U.S. share of total agricultural imports: 11%

Percent of labor force in agriculture: 14%

Membership in economic or trade organizations: EC, GATT, OECD

Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production ¹		
Barley	1,475	1,328
Oats	103	104
Potatoes	581	633
Sugar beets	1,451	1,480
Turnips	550	471
Wheat	474	601

	1990	1991
	<i>thous. head</i>	
Livestock numbers ²		
Cattle		
Beef	4,309	4,435
Dairy	1,590	1,594
Hogs	999	1,069
Poultry	8,870	10,274
Sheep	5,782	6,001

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	514	550
Butter	149	146
Cheese	76	69
Lamb	82	90
Nonfat dry milk	195	182
Pork	159	168
Poultry meat	84	90

¹ Crop years are July-June.

² At start of year.

Growth in agricultural output is restricted by EC programs to reduce surpluses and export costs. A notable exception is sheep numbers, which have been growing at a rapid rate and reached 6 million sheep by the end of 1990. Falling prices slowed growth in 1991; sheep numbers could stop expanding by the end of 1992.

Poor market demand has reduced producer confidence in beef cattle. Cattle numbers expanded sharply from 1989, with increased beef output from

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Corn gluten	83	88
Cotton	39	49
Essential oils	68	16
Lumber	134	12
Peptones/hide powder	51	94
Racehorses	75	35
Soybean meal	49	4
Vegetable oils, fixed	43	2
Wheat	58	3
Wine	53	2
All agricultural products²	2,536	11

¹ Values are shown in U.S. dollars at U.S.\$1=.602 Irish pounds.

² Includes products not listed.

1990 onwards, but numbers are expected to stop growing by 1993. Consumption and exports of Irish beef have been hurt by continuing publicity about the cattle disease, bovine spongiform encephalopathy (BSE), and the illegal use of growth promoters.

Hog production, which has suffered from the relatively high cost of feed in Ireland, began a recovery in 1987, and numbers have been growing slowly since then.

Poultry and egg production and consumption have grown rapidly over the past decade, except for a temporary setback in consumption during the winter/spring of 1988/89, because of the outbreak of salmonella in Ireland and the United Kingdom (U.K.).

Farm and food policy

Irish agricultural prices, policies and structures are governed by the EC's Common Agricultural Policy (CAP).

Ireland is one of the strongest

defenders of the CAP, because of the importance of the high-priced EC system to the economy. The Government and farmers strongly resist GATT proposals to significantly reduce EC price supports and increase third-country access to EC markets.

EC proposals for CAP reform will have far-reaching effects on agricultural output up to 1996. Grain production could fall some 10 percent and milk output by a further 3 percent. The growth in sheep and cattle numbers could level off by 1993. However, lower feed prices could boost hog and poultry production.

Trade trends

Two-thirds of Ireland's imports come from other EC countries, principally the U.K. The United States is the main trading partner outside the EC.

Irish agricultural imports totaled \$2.5 billion in 1990. Leading imports included racehorses, meat, fresh fruits and vegetables, corn gluten feed, other animal feeds, peptones/hide powder, and forest products.

Good weather and less attractive input/output price ratios reduced feed demand in 1990, but imports of some other items continued to grow (although at a slower rate), because of increased consumer spending.

The United States is the only country with a positive agricultural trade balance with Ireland: U.S. agricultural exports to Ireland hit a record high of \$295.5 million in 1989, but fell to \$285 million in 1990. The reduced demand for animal feed and racehorses, in line with a decline in total agricultural imports, was the main reason for the decline.

Three-fourths of Ireland's exports go to other EC countries. The U.K. is the leading export destination; the United States is the largest non-EC buyer.

Ireland's agricultural exports peaked in 1989. Beef and dairy products, Ireland's principal agricultural exports,

fell sharply in 1990 and again in 1991 as EC intervention stockpiles rose rapidly. This situation reflects rising European surpluses, political turmoil in the Middle East and North Africa, and worries in many importing countries about the cattle disease BSE. Lamb is one of the few commodities that continues to show significant export growth.

Ireland's principal agricultural export to the United States is casein (a dairy derivative), which accounted for 67 percent of total Irish agricultural exports to the United States in 1990.

Trade policy and prospects

Ireland's trade policy is governed by its membership in the EC. The complex EC system of tariffs, levies, quotas, and phytosanitary regulations restricts or prevents imports of many agricultural products. In addition, Ireland has its own strict animal and plant health import regulations. However, there is a move to relax some of these as Irish authorities recognize that with the unification of the EC market by the end of 1992 the lowering of these import barriers is inevitable.

The Irish market should continue to be attractive to U.S. exporters, provided that the dollar does not strengthen significantly. Ireland will remain a large importer of U.S. nongrain feed ingredients, such as corn gluten feed and oilseed meals.

There is also interest in U.S. convenience foods, health foods, snack foods, fruits, nuts, and beverages. The principal constraints to the marketing of U.S. high-value products are EC tariffs and logistical problems. The relatively small size of this market means that cargoes are normally transshipped through other European ports. ■

Profile of agriculture

Israel is about the same size as New Jersey. From its fertile Mediterranean coastal plain, the land rises to the east to

about 2,800 feet, then falls to the Jordan-Red Sea rift valley. To the south is the Negev Desert, which occupies 60 percent of the land area.

Israel's small size belies its broad range of climatic variability. The diverse climatic conditions support a variety of crops ranging from deciduous to semitropical and tropical fruits, and from wheat and barley to winter flowers and vegetables. The main factor limiting production is water; almost the entire southern half of the country is semi-desert or desert.

Production is characterized by three main farm types: the large-scale (2,500 acres average) collective kibbutz; the small, cooperative family farm (averaging 15 acres); and private holdings which vary from a few acres to 250 acres and more. The average size of private holdings is 20 acres.

Agriculture is a declining sector. Its share of the gross domestic product now fluctuates between 3 and 4 percent.

Present agricultural planning and farm investment emphasize high-value winter export crops. The target markets are high-income groups in Europe and North America.

In 1990, farm income from exports grew 7 percent, boosted by improved returns on citrus, avocados, and winter vegetables. Flower production, mainly in greenhouses, also was a major foreign exchange earner. Exports of flowers in 1990 grew by 5 percent to 840 million stems, mainly carnations and roses.

Production trends

Agricultural production in 1990/91 suffered from insufficient rain because of continued drought, higher prices for water as the Government cut irrigation quotas by 50 percent, and reduced availability of agricultural laborers and sea transport during the Gulf War. Total fruit production dropped by 27 percent to just under 1.4 million metric tons. The main source of the decline was the drop in citrus production.



Israel at a Glance

Population (1991 average): 5.2 million

Urban population: 89%

Population growth rate (1991): 6%

Per capita income (1991): \$11,850

Land use: Crops 22%, meadows and pastures 40%, forest and woodland 6%, other 32%

Major crops: Citrus, wheat, cotton, vegetables and flowers for winter export, avocados

Livestock sector: Dairy and beef cattle, poultry, freshwater fish

Leading agricultural exports: Citrus products, flowers, fresh citrus, winter vegetables for export, avocados, cotton

Leading agricultural imports: Wheat, soybeans, feed grains, dried fruits and nuts, processed foods

Agricultural imports as a share of total imports: 9-12%

U.S. share of total agricultural imports: 31%

Percent of labor force in agriculture: 3.5%

Membership in economic or trade organizations: GATT

Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production¹		
Apples	100	74
Avocados	44	51
Citrus	1,530	1,021
Corn on the cob	126	107
Grapefruit	399	356
Grapes, table	45	38
Potatoes	214	220
Seed cotton	134	55
Tomatoes, canning	347	185
Wheat	275	175

	1989	1990
	<i>thous. head</i>	
Livestock numbers		
Cattle		
Beef	134.4	141.3
Dairy	200.6	196.3
Goats	120.0	115.0
Poultry ²		
Layers	9.5	9.8
Broilers	11.2	14.3
Turkeys	2.0	2.8
Sheep	380.0	375.0

	1989/90	1990/91
	<i>thous. metric tons</i>	
Animal product output		
Beef	71	73
Eggs ³	1.5	1.7
Milk ⁴		
Cows	886	947
Goats	3	2
Sheep	8	7
Poultry		
Broilers	179	197
Turkeys	71	86

¹ Crop years are Oct.-Sept.

² Millions.

³ Million eggs.

⁴ Million liters.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Barley	40.0	19
Beef, frozen	66.9	0
Beef offals	5.6	23
Corn	49.6	83
Cotton	23.6	33
Dry fruit and nuts	49.0	28
Food residues, animal feed	44.7	32
Fruit and vegetable preparations	53.1	1
Rice	27.8	11
Sorghum	49.5	100
Soybeans	102.5	100
Tobacco	23.1	33
Wheat	110.6	85
All agricultural products ²	1,349.1	31

¹ Values are shown in U.S. dollars at U.S.\$1=1.9182 new Israeli sheqels.

² Includes products not listed.

The high production levels for processed tomatoes in 1990 were not sustained in 1991, when levels dropped to less than 200,000 tons.

Cotton is one of the few crops that can be irrigated with both brackish and recycled water. Production in 1990 totaled 134,000 tons from 32,000 hectares. Because of water restrictions, only 12,000 hectares were planted in 1991, yielding an estimated 55,000 tons of seed cotton.

Poultry and livestock production rose in 1990/91, partially reflecting increased demand from new Soviet and Ethiopian immigrants.

Farm and food policy

The Government has abolished almost all agricultural production subsidies. The price of water to farmers is still below pumping and transport costs, but the Government is raising prices rapidly. Policymakers intend to remove all subsidy elements from water within a 5-year period.

The severe water deficit in the country's two aquifers led to a 50-percent reduction in irrigation water quotas in 1991. The cuts were continued in 1992 in spite of heavy rains which may have cut the stored water deficit almost in half. The combination of reduced water availability and higher water prices will, of necessity, direct agricultural production towards high-value fruit and vegetable export crops, grown out of season in greenhouses. Government grants assist in the transition. The Government also supports research in improving irrigation efficiency and in developing very high value crops, or varieties that can use recycled and brackish water.

The Government is financially assisting citrus growers who regraft their trees with newer commercial varieties than the traditional Shamouti and Valencia oranges and "white" (Marsh) grapefruit. Other export crops that receive Government assistance are flowers, table tomatoes, and table grapes.

Trade trends

In 1990, Israel's food and agriculture imports and exports were about in balance at \$1.3 billion each.

Israel has a very large agricultural trade deficit with the United States. In exchange for U.S. economic support, Israel has an annual goal to import 1.6 million tons of bulk U.S. agricultural products. All its wheat (about 500,000 tons), soybeans (between 300,000 and 400,000 tons), and sorghum imports

regularly come from the United States. Israel's imports of European corn grits and feed wheat of 300,000 tons each partially replaced U.S. sorghum sales, which dropped to 169,000 tons from 354,000 tons the previous year.

Israel is self-sufficient in poultry and lamb, but imports about 60 percent of its fresh beef. In 1990, meat imports totaled over \$70 million, mostly from Latin America.

Other significant imports included dried fruits and nuts (almost \$50 million in 1990) and another \$89 million worth of processed fruits and vegetables, mainly as inputs to the food manufacturing industry.

Trade policy and prospects

Israel bans all poultry imports and imposes strict quotas on raisins, prunes, and most fresh fruits and vegetables. At present, Israel maintains high variable agricultural import levies on a number of sensitive products.

Since 1988, Israel has pursued a policy of import liberalization for oilseeds, feed grains, and wheat. Healthy competition has developed among importers of oilseeds and feed grains. Competition is not as active in the wheat sector because of the long-standing, traditional cartel structure of the wheat milling industry.

Israel has bilateral trade agreements with the European Community (EC) and the United States. The agreement with the EC does not include agricultural goods. That with the United States does. The Israel-U.S. Free Trade Agreement calls for a mutual elimination of all customs duties by 1995. Israel has begun negotiations on a trade agreement with the European Free Trade Area (EFTA) countries. ■

Profile of agriculture

Agriculture on Italy's long, thin peninsula is representative of both northern and southern Europe. The northern part of the country produces primarily grains, sugar beets, soybeans, meat, and dairy products, while the southern region specializes in fruits, vegetables, olive oil, wine, and durum wheat.

Although much of Italy's mountainous terrain is unsuitable for farming, nearly 10 percent of its work force is employed in agriculture. This level, although declining, is still more than double the average percentage of other European Community (EC) countries. Agricultural employment varies from 4 to 5 percent in the most industrialized areas of the north to 15-20 percent in the south.

Agricultural Production

	1989	1990
	<i>thous. metric tons</i>	
Crop production ¹		
Apples	1.9	2.0
Citrus ¹	3.2	2.9
Corn	6.4	5.9
Olive oil	0.6	0.2
Soybeans	1.6	1.5
Sugar beets	16.9	13.8
Tomatoes	5.7	5.8
Wheat	7.4	8.1
Wine grapes	8.0	7.4
Rice	1.3	1.4

Livestock numbers ²

	<i>mil. head</i>	
Cattle		
Beef	8.9	8.6
Dairy	2.9	2.9
Hogs	9.3	9.1
Poultry ³	1,025	1,050
Sheep	11.7	11.6

¹ Includes oranges, lemons, and tangerines.

² Estimates as of January each year.

³ Thousand metric tons.

Most farms are small; average farm size is about 8 hectares. In 1990, agriculture and food industries accounted for about 6 percent of Italy's gross domestic product. Crop production (including tree crops) accounts for over 60 percent of the commercial value of Italian agricultural production. The leading products are vegetables, cereals, grape products, fruits, and olive products. The remaining agricultural output (nearly 40 percent) is comprised of livestock products, chiefly meat, and to a lesser extent, milk and eggs.

Production trends

The average annual increase in agricultural production has been less than 2 percent since 1980, one of the lowest in the EC.

Crops that have expanded during the past decade include oilseeds (especially soybeans), kiwifruit, and some minor vegetable and animal products. Rice, sugar beets, beef, tobacco, and table grapes have been stable.

Soybean cultivation, previously almost unknown, has expanded rapidly since the mid-1980's, encouraged by high EC support prices. Italy is now the principal producer of soybeans in the EC. To a lesser extent, sunflower cultivation has followed the same production pattern as soybeans.

Kiwifruit production has expanded significantly in Italy during the past decade, increasing steadily from 32,500 metric tons during 1985 to 240,000 metric tons during 1990. Italy is projected to become the world's leading producer of kiwifruit. Current Italian kiwifruit area exceeds that of New Zealand.

Dairy production in Italy has declined during the past decade. Despite a high volume production of milk and cheese, Italy remains a significant importer of dairy products because of the specialized nature of the Italian dairy industry. Most of the milk produced is used for the production of high-quality cheeses;



Italy at a Glance

Population (1991): 57.7 million

Urban population: 68%

Population growth rate: 0.2%

Per capita income (1990): \$14,600

Land use: Crops 42%, meadows and pastures 17%, forest and woodland 22%, other 19%

Major crops: Fruits, wine grapes, vegetables, cereals, potatoes, olives

Livestock sector: Beef and dairy cattle, hogs, sheep, poultry

Leading agricultural exports: Fresh and processed fruit, wine, olive oil, pasta, tomato products, vegetables, cheese

Leading agricultural imports: Meat, forest products, fish, live cattle, hides and skins, cheese, wheat, cotton, wool, horticultural products

Agricultural imports as a share of total imports: 14%

U.S. share of total agricultural imports: 3%

Percent of labor force in agriculture: 10%

Membership in economic or trade organizations: EC, GATT, IBRD, IDA, IDB, IFAD, IMF, OECD

as a result, a large market exists for lesser quality milk and cheese imported from other EC member states.

A significant reduction in Italian production of tree nuts has occurred during the past decade. In the southern areas of Apulia and Sicily, where almond production is concentrated, vegetables, table grapes and citrus have replaced almonds in the more productive irrigated areas. Italy has become a

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Corn gluten feed	100.2	61
Cotton	639.2	32
Forest products	2,660.8	9
Oilseeds and meal	760.9	14
Tobacco	181.6	38
Wheat	1,214.7	7
All agricultural products²	25,259.2	3

¹ Values are shown in U.S. dollars at U.S.\$1=1,198.3 lire.

² Includes products not listed.

net importer of almonds and walnuts, largely from California.

Farm and food policy

Italian agricultural policy has been influenced by the EC's Common Agricultural Policy (CAP) and by deeply rooted regional imbalances and structural inadequacies. Until recently, Italy was generally a net beneficiary of CAP financing. However, the diversity of traditional Italian agriculture—continental crops on the northern peninsula and Mediterranean crops on the southern peninsula and islands—created many problems in adjusting to the CAP. Since 1960, heavy migration from rural areas, especially the south, to urban areas paralleled rapid economic development. Given the relatively old average age of the remaining farm population, it may be difficult to stop this trend.

The CAP reforms of the past 5 years are often seen by Italians as having generally been more detrimental to Italian agriculture than to farmers in northern member states.

EC regulations aimed at reducing the large northern EC dairy and beef surpluses are considered unfavorable to the less efficient producers in Italy.

Reduced EC support for grains, which has led to lower durum wheat production, has been unpopular. Italy is the largest EC durum wheat producer. EC actions affecting sugar, citrus, and oilseed crops are also perceived as leaving Italian farmers at a disadvantage.

The Government's immediate concern is to improve farm income, particularly in the southern part of the country. Long-term policy goals include continued development and modernization of agriculture to boost output and reduction of the agricultural trade deficit.

Effective food distribution is a problem in Italy. Although small-scale, family enterprises still dominate the system, their numbers have been declining. A vast number of street market stalls still sell fresh produce daily. Supermarkets and department store food operations have gained in importance as Italians discover the price and convenience advantages of larger outlets. Most supermarkets are concentrated in the northern part of the country.

Trade trends

Italy, a net agricultural importer, registered an agricultural trade deficit of \$14.1 billion during 1990, 7 percent below the record 1989 deficit. Total agricultural imports during 1990 were valued at \$25.3 billion.

Italy's trade deficit affects its orientation to the CAP. Imports are mainly northern European products that receive both high internal price supports and import protection, while exports are primarily products such as fresh fruits and vegetables and wine, which receive weaker EC support, particularly export subsidies.

Total Italian agricultural exports during 1990 amounted to \$11.2 billion. The leading Italian export items included: fresh fruit, wine and vermouth, fresh vegetables, tomato products, canned fruit and juices, pasta, and

cheese. Italian agricultural exports to the United States totaled \$788 million, led by wine, olive oil, pasta, and spirits.

Trade policy and prospects

Italy applies EC tariffs, levies, and other regulations such as phytosanitary, labeling, and health norms to imports from third countries. National regulations on some high-value products are more rigid than those required under EC directives. For example, Italy prohibited imports of beef or beef products treated with growth hormones long before similar EC legislation was enacted.

Italy also prohibits imports of citrus fruits (except grapefruit); restricts or bans imports on non-EC, Northern Hemisphere deciduous fruit and table grapes; and restricts imports from Southern Hemisphere countries to certain dates. Italian food additive requirements generally are stricter than EC norms.

Health and safety issues will continue to figure in U.S.-Italian agricultural trade, foreshadowing the possibility of further controversial issues after the EC abolishes internal trade barriers in January 1993.

The unification of the EC market by 1993 is likely to both help and hinder U.S. exports to Italy. On the positive side, standardized sanitary, health, food additive, and labeling requirements should make it unnecessary for exporters to develop separate product formulations and packaging to meet rules now unique to Italy. In addition, EC market integration may bolster the current trend toward greater acceptance of nontraditional foods by Italian consumers.

On the other hand, U.S. exporters can expect to face greater competition from suppliers throughout the EC as the existing barriers to intra-EC trade are dismantled. ■

Jamaica

Profile of agriculture

Though agriculture contributes only 8-10 percent to Jamaica's gross domestic product, it employs roughly 23 percent of the labor force. About 53 percent of total land area is devoted to agriculture,

most of which is concentrated in the southern half of the island.

An estimated 77 percent of all farms operate on 2 hectares or less and account for 16 percent of total acreage cultivated. Of total acreage in production, 56 percent is found on less than 1 percent of all farms. Larger farms and estates are devoted to the production of livestock and tropical crops such as sugarcane, bananas, coffee, pimento, and citrus.

The agricultural sector is constrained by the lack of Government support for training, research, and development; lack of interest in farming among the young; affordable credit; appropriate land-use patterns; excessive property losses as a result of land seizures; and an inadequate marketing and distribution system.

Production trends

The general outlook for Jamaican agriculture is fairly positive. Recently enacted policy changes, including the decontrol of the Jamaican dollar and liberalization of the economy, are improving the international competitiveness of Jamaican products and generating renewed interest and investment in agriculture. The sugar industry, for example, is increasing production through improved cultivation practices and the use of better quality cane stock. Because of these measures, the sugar production target of 264,000 metric tons envisaged in the current 5-year economic plan is now considered realistic.

The National Food Production Program grew out of a recent public debate on Jamaica's inability to pay food-import debts, and failure to produce enough food to meet domestic needs. The program's principal objective is to increase the production of tubers, vegetables, and grains, while at the same time reviving and restructuring outreach services to farmers.

The livestock sector has yet to prosper from the country's transition to a free-market economy. Production



Agricultural Production

	1990	1991 ¹
	thous. metric tons	
Crop production		
Bananas	63	75
Cereals	2	1
Citrus ²	76	55
Cocoa ²	2.1	1.7
Coffee ²	7	9
Condiments	13	2
Fruits	19	6
Legumes	8	2
Pimento	1.6	1
Plantains	28	8
Potatoes	36	6
Sugarcane	237	225
Tubers, other	35	8
Vegetables	108	23
Yams	161	35

	thous. head
Livestock numbers	
Cattle	
Beef	147
Dairy	22
Goats	194
Hogs	46
Sheep	3

	thous. metric tons
Animal product output	
Beef and veal	14.9
Pork	7.4
Poultry meat	51.8
Fish	10.6
Eggs ³	125
Milk ⁴	27

¹ Estimate.

² Crop years for coffee and citrus are June-July, and for cocoa Oct.-Sept.

³ Million units.

⁴ Million liters.

Jamaica at a Glance

Population (1990): 2.5 million

Urban population: 49%

Population growth rate: 0.9%

Per capita income (1990): \$1,401

Land use: Crops 25%, meadows and pastures 18%, forest and woodland 28%, other 29%

Major crops: Sugarcane, yams, vegetables, bananas

Livestock sector: Poultry, beef and dairy cattle, hogs, sheep

Leading agricultural exports: Sugar, bananas, coffee, yams, pimento, citrus

Leading agricultural imports: Wheat, sugar (refined), corn, meat, fish and crustaceans, fats and oils, soybeans, poultry meat

Agricultural imports as a share of total imports: 13%

U.S. share of total agricultural imports: 44%

Percent of labor force in agriculture: 23%

Membership in economic or trade organizations: ACP, CARICOM, FAO, GATT, IADB, IBRD, ICA, IFAD, IFC, IMF, ISO, OAS, UNCTAD

costs continue to climb while income remains low to afford fresh meat, beef in particular. On the other hand, the poultry sector has profited from the need of consumers to extend their purchasing power by buying less expensive forms of protein.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Animal and vegetable fats and oils	17	58
Cheese and curd	10	5
Corn	19	100
Hatching eggs	7.3	100
Meat, fish, and crustaceans	17.8	²
Non-fat dried milk	14.8	8
Poultry parts	15.5	81
Rice	14.8	97
Soybeans	15.6	100
Sugar and products	26	87
Wheat	29.4	66
All agricultural products ³	246	44

¹ Values are shown in U.S. dollars at U.S.\$1=7.28 Jamaican dollars.

² Insignificant.

³ Includes products not listed.

Farm and food policy

The Government's agricultural policy objectives are to increase productivity and exports, to improve the quality of rural life through increased farm income, to curtail rural-urban migration by improving rural employment opportunities, to promote the efficient use of natural resources, and to bolster research and development of technology for the farming community. These objectives are to be achieved by focusing resources on improving efficiency and competitiveness and by minimizing governmental interference.

The Government has begun divesting itself of most of its extensive land holdings in order to generate greater

private sector involvement in agriculture. Primary emphasis is being given to attracting foreign investment and on gaining access to overseas markets. The Government's involvement in the sugar industry will continue to remain large, however, because it owns the majority of factories and totally controls the sugar distribution system.

The Government is in the final stages of removing all producer and consumer subsidies on a number of basic food items. The action has created rampant inflation and forced average food prices beyond the means of many consumers. In another liberalization move, the export marketing system is also being deregulated.

Agricultural commodities are sold locally on a free market basis through a wide network of open-air markets, supermarkets, and roadside stands. This network is hampered by a poor distribution system which simultaneously creates gluts and shortages.

Trade trends

Jamaica is a net importer of agricultural products with a trade deficit of \$16.8 million in 1990. The trade deficit in previous years has ranged from \$24.1 to \$120.1 million. The recent improvement in the balance of trade is a result of increases in the export of bananas, citrus, cocoa, and sugar.

The United States continues to be a major supplier of agricultural products to Jamaica. Traditionally, Jamaica imports corn, soybeans, and hatching eggs from the United States. Wheat is also imported primarily from the United States, but U.S. dominance of the market is slowly being eroded by Canada.

Nearly all domestic consumption requirements for wheat, soybeans, powdered milk, poultry parts, rice, cheese and curd, and corn are met

through imports. There is little or no domestic production of these products.

Trade policy and prospects

The focus of Jamaica's agricultural trade policy is to increase exports and reduce imports. In recent years, both exports and imports have risen, the latter because of Jamaica's high degree of dependency on food imports. Imports will continue to rise, subject to foreign exchange availability, because of the Government's actions to open the domestic market in response to international pressure. In February 1991, Jamaica adopted CARICOM's Common External Tariff (CET), which set import duty rates at between 0-45 percent.

The CET is designed to protect commodities in actual production or that have the potential for regional production.

To simplify the domestic taxing system, the Government recently consolidated a number of taxes under one general consumption tax (GCT). All goods and services imported or produced in Jamaica are assessed a GCT of 10 percent. A number of basic food items, however, are exempt from the GCT, including powdered milk, wheat flour, soybean oil, coconut oil, brown sugar, poultry, corn meal, and eggs.

Jamaica's trade prospects, though greatly improved with the adoption of a freer marketing system, presently are restrained by the lack of foreign exchange.

Jamaica has qualified for trade benefits from the United States under the Caribbean Basin Initiative (CBI). The CBI seeks to support economic growth and expand private sector opportunities in the Caribbean region through free trade arrangements that allow duty-free access to the U.S. market for most products produced in the region. ■

Japan

J

Profile of agriculture

Although agriculture accounts for only 2 percent of Japanese gross national product, more than 15 percent of the Japanese population lives on farms. Despite increasing land consolidation, 70 percent of all farms still cultivate less than 1 hectare, resulting in a highly labor- and capital-intensive agricultural sector.

Farmers are aging and work predomi-

nantly part-time. As a result, few farm households are financially dependent on farming, with 85 percent of their income derived from off-farm sources (industrial jobs, etc.).

Agriculture exists in every region of Japan, with different areas specializing in specific products. The northern island of Hokkaido, however, is of particular importance, accounting for 10 percent of total Japanese agricultural production.

In most areas, farming revolves around rice production, which comprises more than a quarter of the value of all farm products. Continued declines in rice consumption, however, have resulted in Government-mandated and voluntary diversion to other crops. Increasingly, farmers are turning to more profitable operations, particularly in the livestock sector or greenhouse operations.

Production trends

Because of high support prices and cultural importance, rice continues to be the major agricultural commodity and its production remains fairly constant. Under Government programs, however, about one-third of all paddy land is now diverted to other crops. With declining support prices, this trend is expected to continue.

Among many fruits produced domestically, mikan oranges and apples continue to be the two largest items produced and marketed in Japan. However, the domestic fruit industry has been facing keen competition from increased imports of a wide variety of fresh and processed fruits including oranges, grapefruit, and kiwi. The Government has been advising producers not to expand fruit tree area.

In general, Japan continues to be self-sufficient in vegetable production. Total vegetable output, however, has been showing a downward trend, reflecting a tighter situation with farm labor and a declining consumer demand, especially for some traditional vegetables such as daikon radish and Chinese cabbage.



Japan at a Glance

Population (1991): 124 million

Urban population: 77%

Population growth rate: 0.4%

Per capita income (1990): \$23,878

Land use: Crops 14%, meadows and pastures 1%, forest and woodland 67%, other 18%

Major crops: Rice, vegetables, fruit (primarily mikan oranges), wheat

Livestock sector: Fish/aquaculture, poultry, swine, beef and dairy cows

Leading agricultural exports:

Confectionery products, fish meal, pigskins, wheat flour, prepared milk powder, mushrooms

Leading agricultural imports: Logs, lumber, corn, beef, pork, wood chips, soybeans, cotton, wheat, plywood

Agricultural imports as a share of total imports: 16%

U.S. share of total agricultural imports: 36%

Percent of labor force in agriculture: 6%

Membership in economic or trade organizations: ADB, AFDB, APEC, CCC, FAO, GATT, IBRD, ICAC, ICCO, ICO, IDA, IDB, IMF, INRO, IRC, ISO, IWC, OECD, UNCTAD, WFC, WSG

Japanese milk production, although growing steadily, is outpaced by demand, as diets become more western. Limited supplies mean that milk for processing is having to compete with rising fluid milk consumption. Domestic beef production is expected to continue its slight upward trend, in spite of the steady growth in beef imports. However, over the long

Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production ¹		
Barley	346	323
Mikan oranges	2,375	1,988
Raw sugar	983	925
Rice	9,416	9,554
Soybeans	272	220
Wheat	985	952

	1990	1991
	<i>thous. head</i>	
Livestock numbers		
Cattle		
Beef	2,702	2,796
Dairy	2,058	2,067
Hogs	11,816	11,335
Poultry		
Broilers	150,445	142,729
Layers	187,412	177,212

	1990	1991 ²
	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	549	570
Butter	76	70
Cheese	28	29
Eggs ³	39,850	40,250
Milk, cow	8,190	8,180
Pork	1,555	1,490
Poultry meat	1,451	1,435

¹ Crop years are Oct.-Sept. for barley, mikan oranges, raw sugar, and soybeans; Nov.-Oct. for rice; and July-June for wheat.

² Estimated.

³ Million eggs.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Beef and veal	1,673	55
Corn	2,268	87
Cotton	1,176	52
Dairy products	608	4
Fresh fruits	1,235	42
Hides and skins	771	63
Logs	4,502	45
Lumber	2,921	30
Plywood	987	1
Pork	1,673	17
Poultry products	779	25
Soybeans	1,261	73
Soybean meal	141	3
Sugar	662	3
Tobacco, leaf	441	60
Wheat	1,007	53
Wood chips	1,430	37
All agricultural products²	37,160	36

¹ Values are shown in U.S. dollars at US\$1=145.09 yen.

² Includes products not listed.

term, growing per capita consumption is expected to be met by imported beef. Domestic pork production is expected to continue its downward trend in the face of stagnant consumption and increasing imports.

Farm and food policy

The immense and powerful agricultural cooperative system, built upon the large numbers of small, part-time farmers, has worked hard to keep Japanese farm policy tilted toward the status quo of inefficient farms and high support prices.

With an aging farm base and shortage of successors, however, it is clear that reform is necessary. Increasing import

liberalization policy is providing further impetus for change.

Both the Government and the agricultural cooperative system now advocate more efficiency in agriculture—including larger farm size, lower production costs and more rational pricing—but reform is slow. The Government still has complete control over production, pricing, distribution, and trade in all staple grains, including rice and wheat. But internal and external pressures have caused the reins over domestic distribution of rice to be loosened and support prices of both rice and wheat to be brought down somewhat. Similarly, with beef imports liberalized, the Government is no longer officially involved in beef imports.

Elimination of official control has not always ensured a free market. The Government often uses "administrative guidance" to achieve unofficially what it is unable to control directly. It also tolerates or endorses a large degree of collusion, monopolistic or oligopolistic control, and other barriers to free trade.

Trade trends

Japan is the largest net food importer in the world, with about half of all calories provided by imported food. The United States, the major supplier for virtually all commodity groups imported by Japan, provides more than a third of all Japanese agricultural imports.

Japan continues to be the pre-eminent export market for the U.S. forest products, accounting for over 40 percent of total U.S. exports. Good potential exists for increased exports in the coming years, especially if the current high tariffs on panel and other processed wood products are lowered, and continued progress is made in revising Japan's Building Standards Law to allow greater use of wood in housing construction.

The outlook for Japanese feed grain imports is somewhat stagnant because of

a downturn in compound feed production as the livestock industry finds it increasingly difficult to compete with livestock product imports. Japanese soybean imports are also expected to continue their slight downward trend, primarily as a result of the stagnation of the livestock sector and increased soybean meal imports from China. Depending on the availability of Brazilian soybean supplies, U.S. market share is expected to remain at roughly 75 percent.

Japan continues to be the single largest market for U.S. beef exports. Imports are expected to increase significantly as a result of liberalization. Pork imports are also expected to continue showing an upward trend to make up for the steady decline in domestic production.

Trade policy and prospects

Traditionally, agricultural trade policy has emphasized minimizing imports where possible and, where not possible, encouraging imports of raw materials.

Japan is under heavy pressure from its international trading partners to open its market to a wider variety of agricultural products. In response, the Government agreed in 1988 to improve market access for beef, citrus, and many high-value, processed agricultural products.

Japan has also expanded access to its starch and dairy markets, but it has yet to liberalize those markets as it is required to do under a 1988 General Agreement on Tariffs and Trade (GATT) panel ruling. In addition to the trade barriers which remain on these and other items, restrictive phytosanitary requirements and high tariffs continue to hinder expansion of U.S. agricultural exports.

With respect to the politically charged issue of liberalizing its rice market, the Government remains officially committed to the principle of self-sufficiency. ■

Kenya

Profile of agriculture

The centerpiece of Kenya's economy, agriculture contributes nearly 30 percent to the gross domestic product, generates 65 percent of total export revenues, and provides employment for close to 75 percent of Kenya's work force.

Despite agriculture's importance, the country is extremely short of good agricultural land. Out of a total land area of 57 million hectares, only 17 percent is judged to be of high-to-medium agricultural potential, while 75 percent is semi-arid, and 8 percent of the total area is barren.

Agricultural Production

	1990/91	1991/92
	<i>thous. metric tons</i>	
Crop production ¹		
Coffee	90	99
Corn	2,630	2,800
Pineapples ²	241	263
Pyrethrum	10	12
Rice	27	27
Sisal ²	40	39
Sugar ²	432	426
Tea ²	197	200
Wheat	185	210

	<i>1991</i>
	<i>thous. head</i>
Livestock numbers	
Cattle	
Beef	9,700
Dairy	3,000
Hogs	65
Poultry ³	25,000

¹ Crop year is Oct.-Sept. for coffee; July-June for corn, rice, wheat, and pyrethrum.

² Calendar years 1990 and 1991.

³ Includes more than 15 million birds in backyard production.

Kenyan agriculture largely consists of small-scale producing units, estimated at no more than 2 hectares on average. These "smallholders" account for approximately one-half of corn production, (the most important grain crop), and the lion's share of coffee and tea production, the country's key export commodities.

On the livestock side, the most developed sector is the dairy industry, where smallholders produce about 75 percent of the nation's milk supply. The beef industry is concentrated in the marginal land areas where crop potential is limited. The small but growing poultry industry faces shortages of quality feed.

Increasing the productivity of Kenya's better agricultural lands is hampered by fragmentation of land holdings, environmental degradation, land tenure disputes, and Government intervention.

Production trends

Kenya is experiencing great difficulty feeding its rapidly growing population. Droughts over the past two to three seasons have curtailed production of major cereal grains. This fact, combined with poor management of the strategic grain reserve, has created serious grain shortages.

Tea and horticulture are the success stories. Tea production in 1991 was estimated at a record 200,000 tons. Now Kenya's most important agricultural export, tea has surpassed coffee in foreign exchange earnings.

New refrigeration facilities at the Nairobi airport freight terminal will improve the quality of horticultural exports, although limited freight space on commercial flights to Europe is a problem.

Kenya's once-dynamic coffee industry was badly damaged by collapse of the export quota provisions of the International Coffee Organization.



Kenya at a Glance

- Population (1991): 25.2 million
- Urban population: 22 %
- Population growth rate: 3.4 %
- Per capita income (1990): \$364
- Land use: Crops 4%, meadows and pastures 7%, forest and woodland 4%, other 85%
- Major crops: Corn, tea, coffee, wheat, sugarcane, beans, sisal, pyrethrum, rice
- Livestock sector: Dairy and beef cattle, poultry, goats, sheep
- Leading agricultural exports: Tea, coffee, pineapples, pyrethrum, other horticulture
- Leading agricultural imports: Vegetable oils, sugar, wheat, tallow, cotton, rice
- Agricultural imports as a share of total imports: 10%
- U.S. share of total agricultural imports: 7%
- Percent of labor force in agriculture: 75%
- Membership in economic or trade organizations: GATT

Coffee prices are at their lowest level since the late 1970's. Growers are adopting inter-planting programs with different crops to sidestep the Government's prohibition on the uprooting of existing coffee trees. Although coffee production in Kenya was up slightly in crop year 1991/92, the long-term trend is downward.

Major obstacles impede the growth of

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Cocoa	2.4	0
Cotton and jute	10.6	1
Plants and plant parts	5.3	6
Rice	8.4	0
Rubber	3.8	0
Sugar	54.7	0
Tallow and animal fats	4.2	23
Vegetables and fruits	4.1	4
Vegetable oil	56.7	1
Wine, beer, and spirits	2.9	3
Wheat	54.5	24
All agricultural products	2215.3	7

¹ Values are shown in U.S. Dollars at U.S.\$1=23.0 Kenyan shillings.

² Includes products not listed. Excludes forest products.

Kenya's livestock industry. The dairy sector satisfies no more than 90 percent of urban milk needs. Various cattle diseases are causing heavy losses of beef production.

Small-scale pig farming is on the increase as Kenyans become more accustomed to eating pork products. However, modern technology and high-quality feed rations are inadequate.

Farm and food policy

The cornerstone of Kenya's farm and food policy is the maintenance of price incentives to farmers designed to provide an adequate basic food supply, at prices which low-income consumers can afford. The Government sets producer prices for corn, wheat, rice, milk, sugarcane, and cotton. Maximum consumer prices also are set for corn-

meal, wheat flour, vegetable oils, milk, bread, rice, and sugar.

The Government has instituted an agricultural adjustment program to liberalize the marketing system, a measure encouraged by international donors who have tied financial aid to progress in relaxing Government controls over agriculture. This new program entails a reduced role for officially sanctioned marketing boards in the distribution of agricultural commodities, along with an expanded role for private traders. Progress achieved in liberalizing the marketing of grain in recent months, however, may now be slowed by the Government's desire to gain greater control of food supplies during the current food shortage.

Trade trends

Kenya is a net exporter of agricultural products. The value of exports in 1990 was \$711 million versus imports of \$215 million. Kenya's positive balance of trade in agriculture, however, is being eroded as exports remain flat while imports are showing an upward trend.

Agricultural exports account for slightly more than two-thirds of Kenya's total export earnings. Coffee and tea normally account for about 70 percent of agricultural export earnings. The recent trend in coffee and tea exports—gains in tea being offset by losses in coffee—is likely to continue in the near-term. Horticultural exports continue to be a bright area for Kenya's agriculture, with export value in 1990 reaching \$139 million, up 27 percent over a year earlier.

Kenya's agricultural imports emphasize basic commodities such as wheat, sugar, vegetable oil, cotton, and rice. Import value jumped from \$130 million in 1989 to \$215 million in 1990. This largely represented a surge in the import volume of wheat and sugar. Saudi Arabia continues to be the dominant commercial supplier of wheat to Kenya.

U.S. shipments of wheat are provided under concessional credit terms.

Sugar imports have been rising sharply in recent years in response to a growing demand and faltering production. Although wheat imports are likely to fall in the near term as the Government redirects grain imports to corn and away from wheat, sugar imports will remain high.

Vegetable oil imports consist almost exclusively of Malaysian palm oil destined for use by the edible oil and the soap industries.

Kenya's agricultural trade exports are becoming less competitive outside the region because of relatively high costs of production. A serious shortfall in grain production is forcing Kenya to import large quantities of corn, wheat, and rice.

Trade policy and prospects

The Government is now struggling with a critical food shortage. Large-scale imports of corn, wheat, sugar, vegetable oil, and rice are required to meet Kenya's food requirements. Kenya finds, however, that its very limited foreign exchange reserves are inadequate to cover the total import bill. During this crisis the Government is likely to issue import licenses only for the most critical food imports.

The Government may be compelled to allow increased participation of private importers who have access to foreign exchange. During the food crisis, potential Kenyan importers of U.S. consumer-ready food products are not likely to receive necessary import licenses. Best prospects for U.S. exporters in the agricultural sector include wheat; limited quantities of processed, high-value foods; vegetable oil; tallow and animal fat; livestock breeding material; and seeds. ■

Korea

Profile of agriculture

South Korea is a mountainous country with a limited amount of arable land. Its agricultural sector is characterized by small owner-operated farms with an average size of 1.2 hectares. Less than 2 percent of the farms are over 3 hectares. The sector contributes about 10 percent to the gross national product and employs about 17 percent of the labor force. Rice is the dominant crop, accounting for about half of all planted

area and contributing about 40 percent to total farm household income.

The Korean livestock sector contributes about 23 percent of total agricultural production. Individual farms have made some substantial improvements in efficiency in recent years, but overall, this highly protected sector remains underdeveloped. Swine farms average less than 40 pigs, and almost 40 percent of all beef cattle are held by farmers with herds of two animals or less.



Korea at a Glance

Population (1991): 43.3 million
Urban population (1990): 85%
Population growth rate: 0.9 %
Per capita income (1991 est.): \$6,253
Land use: Crops 22%, meadows and pastures 1%, forest and woodland 67%, other 10%
Major crops: Rice, vegetables, fruit
Livestock sector: Swine, beef and dairy cattle, poultry
Leading agricultural exports: Leather, refined sugar, leaf tobacco, chestnuts, ginseng products, mushrooms
Leading agricultural imports: Logs, hides and skins, cotton, corn, leather, wheat, beef, wool, plywood, sugar
Agricultural imports as a share of total imports: 14%
U.S. share of total agricultural imports: 35%
Percent of labor force in agriculture: 17%
Membership in economic or trade organizations: ADB, APEC, CCC, FAO, GATT, IBRD, ICAC, IDA, IMF, ISO, IWC, UNCTAD

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Apples	629	540
Barley	417	340
Chinese cabbage	3,241	2,550
Green onions	407	530
Radish	1,686	1,400
Rice	5,606	5,384
Sweetpotatoes	432	376

	<i>thous. head</i>	
Livestock numbers ¹		
Cattle		
Beef	1,622	1,773
Dairy	504	496
Hogs	4,528	5,046
Poultry ²		
Broilers	28	29
Layers	46	46

	<i>thous. metric tons</i>	
Animal product output		
Beef ³	131	130
Butter ⁴	5,100	4,200
Cheese ⁴	6,800	8,400
Chicken ⁵	172	199
Eggs ⁵	596	741
Milk	1,752	1,848
Pork ⁴	633	575

¹ End of year estimates.

² Million birds.

³ Carcass weight basis.

⁴ Metric tons.

⁵ Million dozen.

Production trends

The total amount of land cultivated in Korea has declined slowly since 1968. Rice receives the highest Government support of all the row crops, and its area has been declining more slowly than overall cultivated area. On the other hand, plantings and output are increasing for high-value crops like fruit and winter-grown greenhouse vegetables.

Over the past several years, the Government has been successful in forcing a shift away from the high yielding "tongil" or "unification" variety of rice toward traditional varieties. Tongil makes up the bulk of Government surplus stocks and is considered by consumers to be of inferior quality.

The livestock sector remains underdeveloped, but is characterized by rapid growth through demand driven by increasing consumer incomes. From 1981 to 1991, per capita beef, pork, and poultry consumption each doubled. Imports of most livestock products are scheduled for liberalization by 1997 with tariff rates of 30-50 percent, so the future of the livestock industry is uncertain.

Many believe that with increased investment, pork and poultry farming could become competitive. However, the current regulatory environment limits free access to many production items and puts Korean livestock producers at a significant disadvantage.

Pollution is becoming a major concern and will contribute significantly

to production costs as controls become stricter.

Farm and food policy

The Government remains heavily involved in the domestic agricultural market. Depending on the crop, agricultural prices are kept high by a complex combination of Government purchases, marketing restrictions enforced by quasi-governmental organizations, and/or import restrictions. With few exceptions, the consumer pays

Value of Agricultural Imports, 1991¹

	Total imports \$ mil. ²	U.S. share %
Selected products		
Bananas	229	0
Beef	444	40
Corn	688	36
Cotton	856	54
Fur and furskins	218	17
Hides and skins	1,026	68
Leather	563	15
Logs	1,040	35
Lumber	217	13
Plywood	320	0
Soybeans	259	95
Soybean meal	102	0
Sugar	302	0
Wheat	569	44
Wool	377	2
All agricultural products³	9,200	35

¹ Estimates based on Korean Government trade data for the first 10 months of 1991 (cost and freight basis).

² Korea Customs reports trade in U.S. dollars.

³ Includes products not listed.
Excludes marine products.

directly for this intervention through some of the highest food prices in the world. In a country with per capita income of over \$6,000, over 35 percent of total household spending goes to food.

Many of Korea's farm policies were designed for a subsistence agricultural sector in which little information was available to individual farmers. Strict regulations on agricultural holdings, a remnant of one of the world's most successful land redistribution schemes, severely limit the consolidation of farmland or the sale of farmland for other use. At the same time, quasi-government organizations with their own agendas still control imports of

many inputs. For example, imports of most livestock feed ingredients are tightly controlled by a handful of organizations.

The Government is also heavily involved in regulating the marketing of agricultural produce. Many products must go through specific marketing channels which adds to costs, increases risk, and detracts from freshness. For other products, import permits are only given to those who buy a portion of the domestic crop. The Government may, on occasion, pressure firms such as restaurants to buy local products in place of imported items.

Trade trends

Korea's total agricultural imports reached a record-high \$7.4 billion in 1991, an increase of 8 percent over 1990. Agricultural exports, at \$1.4 billion, accounted for only 0.5 percent of GNP. Korea's agricultural imports continue to be dominated (66 percent) by bulk raw materials for industrial use and for animal feed. Nevertheless, imports of consumer-ready products are increasing quickly, reaching 17 percent of agricultural imports in 1991.

The U.S. share of all agricultural imports dropped sharply from about 47 percent in 1990 to about 35 percent in 1991, due primarily to the loss of the feed corn market to imports of corn from China and imports of feed wheat from Canada, Australia, the European Community (EC), and Turkey. The United States is expected to remain a residual supplier of corn to the Korean feed industry as long as abundant corn supplies are available from China at state-controlled prices, which can always undercut U.S. prices.

In recent years, the U.S. market share of Korea's cotton imports has dropped to around 50-60 percent, reflecting increased competition from lower priced suppliers.

The sharp increase in imports of consumer-ready items can be attributed

to both higher consumer incomes and forced market opening. For example, rising incomes have led to a surge in demand for beef, sending prices to record-high levels. The resulting sharp increase in beef imports was due more to the Korean Government's desire to control inflation than to the agreements signed between Korea and its major trading partners in 1988.

On the other hand, a jump in banana imports from about \$15 million in 1990 to over \$200 million in 1991 can be attributed directly to international pressure to liberalize imports. Other recently liberalized products have developed small, but growing markets in Korea, including alfalfa, hot dogs and sausages, turkey meat, dry beans, and peanut butter.

Trade policy and prospects

The Government protects its domestic farm sector through a number of trade-restrictive measures such as tariffs, quotas, and other import barriers which have a direct and significant impact on the entry of a variety of agricultural products.

Between 1989 and 1991, the United States negotiated the removal of import restrictions on over 130 agricultural products that led to an increase in imports of these products from the United States from \$2 million in 1988 to \$30 million in 1991.

New negotiations with Korea's trading partners, including the United States, have led to agreements to liberalize imports of almost 300 agricultural and fisheries products between now and 1997.

Despite the elimination of these barriers, exporting to Korea can be difficult. Food safety and phytosanitary regulations are often used to keep imported products out of the market. ■

Malaysia

Profile of agriculture

Agriculture remains an important part of the Malaysian economy, although rapid growth in the manufacturing sector has reduced agriculture's once dominant role. The agricultural sector accounts for more than 17 percent

of the gross domestic product and provides employment for nearly 27 percent of the country's work force. In addition, agricultural products constitute 27 percent of Malaysia's total merchandise exports.

Since virtually all of Malaysia lies within 6 degrees of the equator, most agricultural production is dominated by tropical commodities such as palm oil, rubber, cocoa, and tropical hardwoods. Other major commodities include rice, coconuts, sugarcane, pineapples, and other tropical fruits. Poultry and swine also account for a large part of domestic agricultural output, and aquaculture is a small but rapidly expanding industry.

Malaysian agriculture consists of two distinct subsectors. Large, efficient estates primarily focus on export-oriented tree crops such as palm oil, rubber, and cocoa.

Small family farms generally produce basic food crops such as rice, fruits, vegetables, and livestock, but are also important producers of palm oil, rubber, and cocoa. Many modern, large-scale poultry and swine operations also exist.

Production trends

Weak international prices have slowed growth in value of the palm oil, rubber, and cocoa crops, although the volume of production has steadily risen. Several factors could slow the future rate of agricultural growth.

Rapid industrialization is creating competition for both farmland and workers. Land is being lost to urban sprawl, and farm laborers are being attracted to urban areas with the promise of better jobs and living conditions.

Environmental concerns are slowing the clearing of tropical forest for conversion to plantation crop production. These factors obviously will have a greater impact on certain types of agricultural production.

Malaysia is the world's largest producer and exporter of palm oil. Strong promotion in foreign edible oil



Malaysia at a Glance

Population (1991): 18.2 million

Urban population: 39%

Population growth rate: 2.4%

Per capita income (1991 est.): \$2,466

Land use: Crops 13%, meadows and pastures negligible, forest and woodland 63%, other 24%

Major crops: Palm oil, rubber, rice, cocoa, pineapple

Livestock sector: Poultry, swine

Leading agricultural exports: Forest products, palm oil, natural rubber, cocoa, palm kernel oil, fruits, vegetables

Leading agricultural imports: Fruits, vegetables, sugar, corn, dairy products, wheat, fish, cotton, soybeans

Agricultural imports as a share of total imports: 8%

U.S. share of total agricultural imports: 9%

Percent of labor force in agriculture: 27%

Membership in economic or trade organizations: ANRPC, APEC, ASEAN, CCC, FAO, GATT, IBRD, IDB, IMF, INRO

markets and heavy investment in a rapidly expanding domestic oleochemical industry point to continued expansion in the palm oil sector. However, the growing pressures on land and labor could moderate the rate of growth for Malaysia's "golden crop."

Total area planted to rubber has declined steadily since the early 1980's as plantations switched to more profitable oil palms or cocoa. Improved cultural

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production ¹		
Banana ²	505	510
Cassava ²	410	415
Cocoa beans	240	235
Coconut oil	48	45
Palm oil	6,412	6,035
Palm kernel oil	850	769
Pepper	30	32
Pineapple	211	225
Rice, milled	1,160	1,000
Rubber	1,291	1,250
Sugarcane	105	95
Tobacco	11	11

	1989	1990 ¹
	<i>thous. head</i>	
Livestock numbers ²		
Buffalo	135	130
Cattle	607	614
Goat	283	282
Hogs	2,016	2,286
Poultry		
Broilers	1,916	2,152
Layers	256	271
Sheep	181	200

	<i>thous. metric tons</i>	
Animal product output ²		
Beef and veal	14	12
Eggs ³	3,900	4,210
Milk ⁴	25	26
Pork	148	160
Poultry meat	361	388

¹ Calendar year, except Oct.-Sept. for cocoa, palm oil, and palm kernel oil.

² Peninsular Malaysia only.

³ Million eggs.

⁴ Million liters.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Corn	211.4	2
Cotton ²	125.7	15
Crude natural rubber	107.7	2
Dairy products	199.7	1
Fish and preparations	136.4	2
Fruits and vegetables	233.3	16
Meat and preparations	92.1	5
Rice, milled	100.0	³
Soybeans	122.3	35
Sugar and preparations	233.3	³
Tobacco and products	50.7	67
Vegetable oil	74.9	4
Wheat	144.6	10
All agricultural products ⁴	2,291.1	9

¹ Values are shown in U.S. dollars at U.S.\$1=2.75 Malaysian ringgit.

² Includes other natural fibers.

³ Less than 0.5 percent.

⁴ Includes products not listed.

practices and planting materials have sustained natural rubber output, but growing labor shortages are certain to affect production of this labor-intensive crop. Malaysia also will face increasing competition from other low-cost producer countries.

Cocoa plantings expanded sharply in the late 1970's and early 1980's, allowing Malaysia to become the world's fourth largest producer of cocoa. In recent years, low world prices have forced some growers to switch to other crops.

Growing domestic and export demand for animal products has encouraged steady expansion in Malaysia's livestock sector. The swine and poultry industries, in particular, have moved from small, backyard projects to large, commercial operations. Land development pressures and environmental concerns could discourage future growth of animal production.

Farm and food policy

National farm and food policy focuses on increasing agriculture's contribution to the overall economic development of the country, and reducing rural poverty. Heavy Government spending on agriculture and rural development is supplemented by additional allocations for social services, transport, and public utilities designated for rural areas.

Much of the agriculture and rural development budget goes to public agencies to rehabilitate or develop agricultural land and organize producers under the management of large cooperative-like projects. Such schemes have had good success in both increasing Malaysia's agricultural output and improving rural incomes.

In addition to the land development schemes, the Malaysian Government supports the domestic rice and tobacco sectors by providing irrigation projects and extension services, subsidizing production costs, and supporting minimum prices.

The Government provides various incentives for the expansion of other kinds of agricultural production, hoping to tap lucrative export markets or reduce import dependence. Among the targeted industries are fruits, vegetables, fisheries, dairy, beef, and mutton. Partly as a result of these programs, total fruit and vegetable exports have increased sharply in recent years, and aquaculture production is expanding rapidly.

Trade Trends

Agricultural products accounted for 27 percent of Malaysia's total exports in 1990, and generated a positive agricultural trade balance of \$5.5 billion—well above the overall merchandise trade surplus of only \$1.9 billion.

Tropical wood products form the largest agricultural export category, but growing pressure on the logging industry and the continued expansion of the domestic furniture sector should reduce

the volume of Malaysia's log and lumber exports in the years to come.

Vegetable oils, including palm and palm kernel oil, constitute the second largest export group. Long-term world demand projections for edible oils point to continued growth for Malaysian vegetable oil exports.

Despite Government efforts to expand domestic output, agricultural imports continue to increase, reaching \$2.3 billion in 1990. Cereals top a long list of agricultural imports, mainly because of a steadily growing demand for corn to supply the fast-expanding Malaysian livestock industry.

Because of high prices, the United States is only a residual supplier for some of Malaysia's largest imports such as wheat, corn, and dairy products. However, the United States supplies a major share of Malaysia's imports of tobacco, cotton, apples, oranges, grapes, and frozen french fries.

Trade policy and prospects

Malaysia is generally open to trade and imports a wide variety of agricultural goods despite its own domestic bounty. Many bulk commodities such as wheat, corn, soybeans, and cotton enter duty free. However, import duties on most high-value and processed food products are quite steep, averaging 30-50 percent ad valorem. The Government maintains that the high import duties are needed to provide revenue and to offer some measure of protection for developing domestic industries. While relatively few nontariff barriers exist, imports of wheat flour, rice, tobacco, and chicken are restricted.

The Government supports export initiatives in the agricultural sector, and provides a variety of tax incentives to domestic manufacturers and exporters. Exporters can also take advantage of low-cost Government financing for a wide range of agricultural products. ■

Profile of agriculture

Mexico's agricultural sector has either stagnated or declined since the early 1980's, with agricultural growth lower than population growth, particularly in recent years. Agriculture accounted for approximately 9 percent of Mexico's gross domestic product between 1989-91, and employed about 26 percent of the total labor force.

Water use plays an increasingly important role in agricultural development as only about 20 percent of the arable land is irrigated. Inconsistent rains mean that the remaining two-thirds of the countryside, which is arid or semi-

arid, will most likely continue to suffer erratic yields.

Farms are generally small, with limited access to improved technology and capital. Mexico is a net importer for most foods and feeds, except for horticultural and tropical products.

Mexico's agriculture is extremely diverse. Irrigated farm areas in the north produce a wide variety of crops including wheat, sorghum, oilseeds, cotton, sugarcane, vegetables, and forage crops. In central Mexico principal crops on nonirrigated farms include staples such as corn and dry beans, while irrigated farms produce feed grains, wheat, oilseeds, and vegetables. Tropical regions of Mexico produce citrus, coffee, rice, sugarcane, and other plantation crops such as bananas, cocoa, pineapple, and vegetables.

Cattle operations are concentrated in the northern and Gulf states where livestock is range fed. Feeder steers and cross-bred, dual-purpose cattle (milk and beef), are gaining importance in the livestock industry as a result of policy changes which encourage exports. Pork and poultry operations are decentralizing into intensive, commercial operations because of increased demand.

Production trends

Agriculture and farm incomes suffered severely during the 1980's, which were characterized by peso depreciation and high domestic inflation.

Improved rainfall during the past years has helped to recover some of the earlier revenue losses. However, severe storms and excessive rainfall during the past harvest season damaged cotton quality. As the Mexican Government reduced or eliminated many input subsidies for most crops and moved closer to free markets, farmers shifted to corn and dry bean production, two items which are still strongly Government supported.



Mexico at a Glance

Population (1991): 83 million

Urban population: 70%

Population growth rate: 2%

Per capita income (1991): \$3,281

Land use: Crops 13%, meadows and pastures 39%, forest and woodland 24%, other 24%

Major crops: Corn, vegetables, beans, oilseeds, feed grains, cotton, coffee, sugarcane, tropical fruits

Livestock sector: Beef and dairy cattle, hogs, poultry, sheep

Leading agricultural exports: Vegetables, feeder cattle, coffee, tropical fruits

Leading agricultural imports: Livestock, poultry products, grains and products, sugar, oilseeds and products

Agricultural imports as a share of total imports: 15%

U.S. share of total agricultural imports: 65-70%

Percent of labor force in agriculture: 26%

Membership in economic or trade organizations: FAO, GATT, IBRD, ICCO, ICO, IDB, OAS

Agricultural Production

	1990/91	1991/92
	<i>thous. metric tons</i>	
Crop production¹		
Cocoa	38	38
Coffee	273	291
Corn	14,100	14,500
Dry beans	1,300	1,000
Honey ²	51	52
Oranges	2,300	2,050
Tomatoes	1,800	1,620
Wheat	3,900	3,700

	1990	1991
	<i>thous. head</i>	
Livestock numbers		
Cattle	31,750	29,850
Beef	29,680	27,760
Dairy	2,070	2,090
Hogs	8,600	8,600

	<i>thous. metric tons</i>	
Animal product output		
Beef	1,550	1,555
Pork	820	825
Poultry meat	700	800
Turkey meat	8	8

¹ Oct.-Sept. marketing years, except for oranges which are Nov.-Oct., and wheat which is July-June.

² Calendar year 1990 and 1991.

Favorable rainfall in tropical areas contributed to increased beef and milk production. Cattle numbers, including beef, dairy and dual-purpose cattle, may increase because of gradual decontrol of milk and beef prices. Poultry and, to a lesser extent, swine production on efficient, well-capitalized operations is increasing.

Vegetable producers and steer exporters benefit from a market-oriented policy and less export regulation. However, other farmers face large

Value of Agricultural Imports, 1990

	<i>Total imports</i> \$ mil. ¹	<i>U.S. share</i> %
Selected products		
Cattle	71	78
Hides/skins, tanned	94	97
Meats, fresh chilled	302	60
Nonfat dry milk	555	1
Tallow	63	92
Corn	435	92
Dry beans	253	40
Oilseeds, except soy/cotton	152	80
Other fats, oils	269	40
Processed foods and beverages	393	70
Sorghum	331	98
Soybeans	217	92
Sugar	558	16
Wheat	46	95
All agricultural products ²	4,300	65-70

¹ Values are shown in U.S. dollars at U.S.\$1 = 2,807 pesos (controlled rate).

² Includes products not listed. Excludes selected forestry products.

debts and low international prices for crops such as coffee and cocoa. The sugar industry continues to undergo structural changes as a result of the recent privatization of sugar mills. Larger carry-over stockpiles should reduce the high import levels reached in past years. Elimination of subsidies for fertilizer, electricity, and fuel have pushed up apple, pear, and citrus production costs.

The forestry sector continues to decline because of land tenure problems and high production costs.

Farm and Food Policy

Mexico adopted a package of austerity measures over the past years aimed at controlling domestic inflation and achieving sustained economic growth.

Agricultural policy has undergone a substantial change as well. Direct and indirect subsidies have been reduced or eliminated for many commodities and producer prices are no longer strictly controlled by Government policy. The primary exceptions are corn and dry beans which still benefit from very high support prices and rigid import controls. These products historically are considered essential to the nutrition of the Mexican population. Production of unsupported crops such as sorghum, wheat, and oilseeds, has declined as farmers have shifted to more attractively priced corn and dry beans.

In late 1991, constitutional modifications ended a 75-year policy of breaking up large land holdings and redistributing lands to communal farmers. New land tenure policies that will transfer title of communal lands to private farmers are being drafted. Domestic and foreign private investment in the communal farming sector will be authorized, and a series of agrarian courts of law will be established.

These changes may have a profound effect on agriculture over the next several years, as over 48 percent of the land is controlled by communal farmers.

Trade trends

Mexico continues to be a net importer of agricultural products, with purchases totaling \$4.3 billion in 1990 versus sales of \$2.8 billion.

Agricultural trade accounted for nearly 3 percent of GDP in 1990. Farm imports represent approximately 20 percent of domestic food consumption. Agricultural trade between the United States and Mexico totaled about \$5.4 billion in 1991, with U.S. exports to Mexico valued at \$2.87 billion and imports of \$2.52 billion.

Mexican agriculture is expected to specialize more in products in which farmers are competitive and efficient, mostly vegetables and tropical products. The Government hopes that agricultural

exports will begin to earn enough foreign exchange to finance required farm imports of products in which the country is not competitive. This is the case for grains and products, oilseeds and products, and selected livestock, poultry, and products.

Trade policy and prospects

Mexico has removed or lowered many trade barriers. Since joining the General Agreement on Tariffs and Trade (GATT) in 1986, Mexico has reduced import tariffs from 100 percent on selected items, to a maximum of 20 percent across the board. Nevertheless, import licenses remain on corn, wheat, some fresh cheese import categories, eggs, poultry meat, and selected horticultural crops. Licenses are required for about 40 percent of the food imports on a value basis.

The United States, Mexico, and Canada plan to complete negotiation of the North America Free Trade Agreement (NAFTA) in 1992. The NAFTA would open a market with very large potential. Mexico's rapid population growth and rising prosperity and its limited agricultural resource base could increase food demand by 5 percent to 6 percent annually during the 1990's.

Agricultural products with substantial sales potential for the United States include feed grains and products; oilseeds and products; processed foods; high-quality beef; animal genetics; dairy products; selected fruits, nuts, and vegetables; wood products; selected skins and semi-processed leather items; livestock and poultry feeds; wine; beer; and other alcoholic beverages.

U.S. agricultural sectors likely to face pressure from a free trade agreement are fresh and processed tomato products, frozen broccoli and cauliflower, asparagus, melons, citrus, strawberries, and fresh-cut flowers. ■

Morocco

Profile of agriculture

Morocco is situated in the northwest corner of Africa. Eighty percent of the area is upland plateau or mountain range. The Atlas mountains, 4,165 meters at their highest point, run the entire length of the country. The climate is semi-arid in the south. In the Saharan regions, summers are very hot and winters bitter cold. The climate is milder along the Atlantic and Mediterranean coasts. Rainfall varies from 32 inches per year in the north to virtually nothing in the Saharan regions.

Agriculture is a major contributor to Morocco's overall economy. In 1990, agriculture accounted for nearly 17 percent of gross domestic product, provided income for about 60 percent of the population, and generated 40 percent of all jobs in Morocco. It was also an important earner of foreign exchange.

Crop output has improved in recent years but is still highly dependent on weather. Rainfall, or the lack of it, has a profound effect on annual production

levels because more than 90 percent of total arable area is dependent on rainfall.

Morocco's arable land, estimated at 8.6 million hectares, is largely devoted to cereal grains, particularly wheat and barley, pulses, citrus, and olives. Average farm size is less than 5 hectares.

Large livestock operations are the exception rather than the rule in Morocco. Most of the dairy cattle are dual purpose, and specialized beef operations are rather rare. Sheep production is generally extensive. Heavy reliance on pasture over many years has resulted in serious overgrazing.

Increasing self-sufficiency of such important commodities as wheat, vegetable oils, and sugar is a national objective for agricultural development. So too is the development of export commodities such as citrus and vegetables.

Production trends

During 1991, grain production reached a record level mostly because of adequate rainfall during the spring. Barley production was up about 52 percent to 3.2 million metric tons compared to 1990, and wheat production was up 40 percent to 4.9 million tons. A serious drought, which began in October, will greatly hamper winter crop production, including wheat and barley. If the drought continues, spring crops and livestock population could be affected considerably.

Citrus production, at 1.47 million tons, was considerably above outturn in the 1990/91 season. All varieties experienced an increase in production; however, the highest increase was in clementines and Maroc-late. During 1991/92, production is expected to be down about one-fourth. Exports of clementines are expected to improve because of higher quality fruit. However, the drought could significantly affect the production of late varieties of oranges and even dampen production in the



Morocco at a Glance

Population (1991): 26.2 million

Urban population: 55%

Population growth rate: 2.1%

Per capita income (1990): \$990

Land use: Crops 19%, meadows and pastures 28%, forest and woodland 12%, other 41%

Major crops: Wheat, barley, pulses, citrus, olives, vegetables

Livestock sector: Dairy and beef cattle, sheep, poultry

Leading agricultural exports: Fish products, citrus, tomatoes, potatoes, processed fruits and vegetables

Leading agricultural imports: Forest products, wheat, tea, coffee, sugar, vegetable oil, dairy products, cotton, cigarettes, planting seeds, hides and skins

Agricultural imports as a share of total imports: 14%

U.S. share of total agricultural imports: 19%

Percent of labor force in agriculture: 40%

Membership in economic or trade organizations: FAO, GATT, IBRD, IMF

Agricultural Production

	1989/90	1990/91
	thous. metric tons	
Crop production		
Barley	2,138,138	3,253
Corn	436	335
Citrus	1,468	1,126
Olives	600	390
Pulses	346	337
Sugar beets	2,978	3,000
Sugarcane	1,015	1,050
Sunflowerseeds	160	109
Vegetables	487	N.A
Wheat	3,614	4,939
	1989	1990
Livestock numbers		
Dairy and beef cattle	3,324	3,346
Goats	5,281	5,335
Sheep	13,761	13,515

coming year. The European Community (EC) still absorbs three-quarters of Morocco's citrus exports.

The area devoted to sunflowers has increased sharply in recent years, reaching 160,000 hectares in 1990, compared to 112,000 in 1989. Given favorable weather conditions, further expansion is expected as the Government pursues its policy of improving self-sufficiency in vegetable oil.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Coffee and tea	94	²
Cotton	67	21
Dairy products	75	²
Feed grains	22	95
Forest products	182	1
Planting seeds	19	5
Rice	9	100
Sugar	80	²
Tallow	4	75
Tobacco and products	30	93
Vegetable oil	76	43
Wheat	170	42
All agricultural products²	963	19

¹ Values are shown in U.S. dollars at U.S.\$1=8.283 dirhams.

² Includes products not listed.

Farm and food policy

A key policy objective is to improve self-sufficiency for staple agricultural commodities. The main incentive for producers continues to be high price supports set by the Government. Currently, price supports are provided for basic crops such as soft wheat, sunflowerseed, soybeans, rapeseed, cotton, sugar beets, and sugarcane.

The Government also assists agricultural producers through irrigation investments, production credits, and some subsidization of inputs such as seeds. To encourage investment in agriculture, farmers are exempted from taxes until the year 2000.

Although domestic food subsidy programs have been reduced in recent years, the level of Government expenditures for these subsidies is still significant. Since retail prices for flour, vegetable oils, and sugar are fixed at

artificially low levels, the Government is deeply involved in the marketing of these important staples.

Most local food retailing takes place in three forms: central markets in urban centers and open-air markets or "souks" in small towns; a very large number of small "mom and pop" groceries spread throughout the towns and cities, offering mostly domestic products; and a small but growing number of supermarkets in major cities that handle some imported processed foods. Morocco's wholesale marketing system is not well developed, thus increasing the cost of food distribution. Many of the small "mom and pop" establishments purchase in small quantities from high-priced distributors.

Trade trends

Although agricultural production improved considerably in recent years, Morocco is still a significant importer of agricultural products. Morocco's population growth rate remains high, at over 2 percent per year, and about three-fifths of its nearly 26 million people are under 25 years old.

Most imports are bulk commodities such as grains, forest products, crude vegetable oils, and cotton. However, items such as hides and skins, industrial tallow, and plant and animal genetic materials are becoming more important. Imports of consumer-ready, high-value items are currently limited, but the potential for growth exists.

In 1990, Morocco's agricultural imports dropped from \$1 billion to \$963 million. The U.S. share, at \$185 million, represented one-fifth of the total agricultural import bill versus one-quarter a year earlier. Wheat, soybean oil, cigarettes, and cotton accounted for over 90 percent of total agricultural imports from the United States. Stiffer competition from the EC is the major reason for the decline in U.S. market share.

Morocco's agricultural exports in 1990 totaled \$1.2 billion, with 90 percent

going to the EC market, particularly France. Principal exports were fresh and processed fish, processed fruit and vegetables, fresh citrus, fresh vegetables, cotton, pulses, and more recently olive oil. These sectors operate basically in a free-market environment. Export revenues in 1991 are up significantly for agricultural products.

Trade policy and prospects

Since 1983, Morocco has been engaged in a program of economic stabilization and reform in close cooperation with the IMF and the World Bank. In 1987, Morocco joined the General Agreement on Tariffs and Trade (GATT), indicating its readiness to undertake further trade liberalization measures. Morocco has liberalized its international trade by no longer requiring import licenses for many items and eliminating outright bans. Annual reductions in the list of products which require licenses are currently made by the Government in consultation with representatives of affected industries.

Licenses are still required to import livestock, pulses, plant and animal genetic material, and many processed food products. While many basic commodities do not require an import license, their purchases are made through Government channels or state-owned enterprises.

State trading remains prevalent for politically sensitive items such as wheat, feed grains, vegetable oils, tobacco, and sugar. In 1989, about 88 percent of agricultural imports from the United States required a license and/or were purchased through Government channels or state-owned monopolies. In addition, some imported bulk commodities, such as feed corn, wheat, barley, and protein meals, are subject to a variable levy, which protects domestic production and generates Government revenues. ■

The Netherlands

Profile of agriculture

After its water—which makes the Netherlands a major transportation center—fertile soil well suited for agriculture may be its next most important natural resource. Historically, agriculture has been so important to the Netherlands that the Dutch have devoted centuries to transforming the sea bed into farmland through an elaborate system of pumps, dikes, and polders.

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production¹		
Coarse grains	282.2	305.1
Corn for silage	2,362.9	2,336.7
Potatoes	7,036.2	6,949.2
Sugar beets	8,623.4	7,189.2
Wheat	1,075.9	944.1

	<i>thous. head</i>	
Livestock numbers²		
Cattle	4,926	5,057
Dairy	1,878	1,849
Chickens	93,000	94,000
Ducks and turkeys	2,138	2,383
Hogs	13,915	13,197
Horses and ponies	70	77
Poultry, other	550	541
Sheep	1,702	1,878

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	521	595
Butter	178	168
Cheese	593	613
Eggs ³	10,799	11,300
Milk		
Cow	11,304	11,150
Other	19	20
Mutton/goat meat	14	18
Pork	1,661	1,610
Poultry meat	525	550

¹ Crop years are July-June.

² Estimates are May each year.

³ Million dozens.

The Netherlands is approximately half the size of New Jersey and 30 percent of its land area lies below sea level. Most of these lowlands are in agricultural use, and the area of reclamation continues to grow.

Dutch agriculture can be classified into four scales of production: large farms, small farms, glasshouse horticulture, and market gardens. The last group is not represented in official statistics, but large gardens traditionally have been important to the domestic vegetable market during the growing season.

Large and small family farms generally are as efficient as their U.S. counterparts, producing sugar beets, milk and dairy products, meat, grain, potatoes, and other products. Commercial flower bulbs and fresh-cut flowers are also grown on a large basis and shipped around the world.

Glasshouse or greenhouse horticulture constitutes a major agricultural sector. It allows the year-round cultivation of food and flower products despite the cool, marine climate and frequent storms. The Netherlands boasts 10,000 hectares of greenhouse production capacity, growing vegetables, potted plants, mushrooms, and cut flowers.

Dutch agriculture accounts for approximately 4.4 percent of the country's gross domestic product and employs 4.2 percent of the work force.

Production trends

Balancing the land-use constraints in the Netherlands between urban and agricultural demands continues to force Dutch agriculture toward increasingly larger scale and more capital-intensive enterprises. As a result, the total number of farms continues on a gradual but consistently downward trend. From 1980 to 1991, the number of farms has fallen from 136,000 to 123,000.

Total cultivated area has remained relatively stable at 2 million hectares. Pastureland accounts for 1.09 million



The Netherlands at a Glance

Population (1991): 15.0 million

Urban population: 7.5 million

Population growth rate: 0.6%

Per capita income (1991): \$19,653

Land use: Crops 26%, meadows and pastures 34%, forest and woodland 9%, other 31%

Major crops: Fruits, vegetables, cut flowers, potatoes, sugar beets, flower bulbs

Livestock sector: Hogs, chickens—broilers and layers, ducks, turkeys

Leading agricultural exports: Cut flowers, dairy products, flower bulbs, pork, poultry, vegetables, potatoes

Leading agricultural imports: Animal fats, brewer grains, citrus pulp, corn gluten, oilseeds, dairy products, wood products

Agricultural imports as a share of total imports (1991): 15%

U.S. share of total agricultural imports (1991): 7%

Percent of labor force in agriculture (1991): 4%

Membership in economic or trade organizations: Bcnelux, EC, FAO, GATT, IBRD, OECD

hectares, arable cropland for 797,000 hectares, and horticultural/greenhouse production for 108,000 hectares.

Horticultural products (flowers/ornamental products, fruits, vegetables, and flower bulbs) continue to shine as the growth sector. For 1991, total production was valued at an estimated \$7.5 billion, or more than 36 percent of total

Value of Agricultural Imports, 1991¹

	Total imports \$ mil. ²	U.S. share %
Selected products		
Animal feed	1,824	7
Fruits and vegetables	2,497	6
Grains and products	1,714	-
Meat, including poultry	1,213	-
Milk and products	1,969	-
Oilseeds and products	2,082	22
All other	6,992	4
All agricultural products³	13,273	7

¹ January - August.

² Values are shown in U.S. dollars at U.S.\$1=1.87 guilders.

³ Includes wood products.

Dutch agricultural production. Rising demand in eastern Europe and the former East German states has helped fuel this growth. Sixty-five percent of 1991 horticultural production was exported.

The arable crop sector (cereals, sugar beets, and potatoes) experiences annual fluctuations in production value. In 1991, the production value of this sector dropped 8.1 percent, to \$1.6 billion, mainly because of weather damage. Since 1986, the arable crop sector has accounted for approximately 8.5 percent of total agriculture production value. Proposed price cuts and low returns per hectare, especially within the cereals category, should lead to a continued moderate decline within this sector.

The livestock sector, which is considered the "backbone" of Dutch agriculture, had a good year in 1991, although total production value of \$11 billion (56 percent of total agricultural production value) was unchanged from 1990 and slightly less (in *guilder* terms) than in 1986. The loss in market share value was solely the result of the increased contribution of the horticulture sector.

Poultry has led growth in the meat sector during the past several years. By 1991, poultry meat production value of \$800 million was up almost 39 percent from 1988. The pork sector remains the largest, although total value declined somewhat in 1991 to \$3.3 billion. The beef sector has remained relatively constant during the past 4 years.

The outlook for the general livestock and meat sector is somewhat guarded as a result of rising concerns over water pollution from excess animal waste. Although the Government has begun to expand the country's manure processing facilities, the cost involved in processing the waste and the possible continued rise in excess manure could force reductions in herd sizes, particularly within the pork and dairy sectors.

Farm and food policy

Government policies for agriculture in the 1990's emphasize competitive, safe, and sustainable agriculture that protects the environment over the long-term and meets socioeconomic objectives. This policy holds that rural and urban living standards should be equal.

Many of the agricultural practices used in the Netherlands are highly intensive, and the environmental effects of these practices are of great public concern—particularly water, soil, and air pollution from use of fertilizers and pesticides. The Government has initiated measures that will severely restrict the use of pesticides by the year 2000. The Government has also been forced to expand measures designed to confront the worsening manure problem. However, implementing these measures will be difficult because of the high costs of processing and limited demand for processed manure as an artificial fertilizer substitute.

Dutch interest in food quality and safety is very high. Normally, the Netherlands adopts European Community (EC) policies on food quality. A recent concern raised by the

Netherlands' food consumer organizations involves the quality of animal feed and its effect on milk and meat products. In reaction, the Dutch feed industry has established a plan to ensure that animal feed is safe to use.

Trade trends

For both EC and non-EC products, the Netherlands continues its historical role as a leading transshipper of agricultural commodities—a position ensured by the Dutch port of Rotterdam, the largest in the world.

Agricultural exports are very important to the Dutch trade balance, accounting for 24 percent of total Dutch export trade. The Netherlands' net agricultural trade surplus has grown steadily. Agricultural exports rose 20 percent from 1985 to \$31 billion in 1990.

Agricultural imports by the Netherlands are estimated to be \$18 billion for 1991. Although falling in rank during the last several years, the United States was the seventh largest supplier, furnishing 7 percent of total import value. Major U.S. products include soybeans, animal feeds, fresh grapefruit, raisins, nuts, wines, tobacco, and forest products such as hardwoods and plywood.

Trade policy and prospects

The Netherlands exports about 65 percent of its total agricultural output and places great emphasis on export expansion as vital to the farm sector's growth, as well as to the overall Dutch economy. However, although export-oriented production is encouraged, it is not allowed to conflict with national priorities such as protecting the environment.

Generally the Dutch see free trade as working to their advantage. Within EC trade councils, the Dutch Government generally presses for liberalized trade, sometimes in opposition to the positions of other member countries. ■

New Zealand

Profile of agriculture

New Zealand lies in the temperate zone of the South Pacific and occupies an area about the size of Colorado. Hills, mountains, and some large coastal plains dominate the two main islands, North and South Island. New Zealand has a diverse topography with a reasonably predictable climate, characterized by mild to warm weather with abundant rainfall.

Farm production, processing, and transportation account for one-quarter of the gross national product. Labor directly employed on farms makes up

about 11 percent of the total work force. The agricultural industry is highly developed and very dependent on exports. Roughly two-thirds of total production is exported and agricultural and forestry exports make up 58 percent of total exports.

Much of New Zealand's agriculture is pasture-based because climatic conditions allow grass growth almost year round. Milk, wool, beef, and sheep meat account for about 60 percent of New Zealand's agricultural output. Dairy production is principally confined to the North Island. Sheep, cattle, and forestry are common throughout the country. Fruit production is concentrated around the North Island's Bay of Plenty (kiwifruit) and Hawke Bay (apples and stonefruit), and at the northern tip of the South Island (apples and kiwifruit). Although corn is grown on the North Island, most of the grain production is found on the South Island.

Roughly a fourth of the land area is covered by indigenous forest; very little is allowed to be cut. As a result, most of New Zealand's commercial timber—mainly pine—is produced from the land area covered by commercial or private plantations.

Production trends

Production from the pastoral sector increased 5 percent in 1991, mainly as a result of an increase in beef and dairy production. Sheep numbers continue to fall and have been declining since 1984. The reduction in sheep numbers has been partially offset by a rise in beef cattle and deer. New Zealand is now producing more beef than sheep meat. Dairy production continues to fluctuate depending on climatic factors but dairy cow numbers are currently at record levels.

In the nonpastoral sector, roundwood (logs) harvesting is increasing sharply as trees planted in the early 1960's mature. Apple production is increasing steadily but it is a small sector. Kiwifruit



New Zealand at a Glance

Population (1991): 3.4 million

Urban population: 76%

Population growth rate: 1%

Per capital income (1990): \$12,573

Land use: Crops 2%, meadows and pastures 53%, forest and woodland 38%, other 7%

Major crops: Apples, barley, kiwifruit
Livestock sector: Dairy and beef cattle, sheep, goats, deer

Leading agricultural exports: Sheep meat, beef, dairy products, forest products, animal fat, wool, apples, kiwifruit

Leading agricultural imports: Sugar, fruits, grains, vegetable oils, coffee, nuts, vegetables

Agricultural imports as a share of total imports: 7%

U.S. share of total agricultural imports: 13%

Percent of labor force in agriculture: 11%

Membership in economic or trade organizations: CER, GATT, IMF, OECD

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production¹		
Apples	404	424
Barley	378	420
Corn	161	195
Kiwifruit	250	209
Oats	74	75
Peas	57	59
Roundwood ¹	13,105	13,500
Wheat	185	198

	<i>thous. head</i>	
Livestock numbers		
Cattle		
Beef	4,600	4,670
Dairy	3,460	3,420
Deer	976	1,166
Goats	1,060	790
Sheep	57,900	55,900

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	448	518
Butter	276	269
Casein	64	64
Cheese	122	125
Milk powder	381	422
Sheep meat	509	513
Wool	309	305

¹ Thousand cubic meters.

production had been increasing steadily until 1990, but production fell 16 percent in 1991 and is expected to remain at this lower level in 1992. Grain production is recovering from restructuring and drought and increased 11 percent in 1991, but the production area is not expected to change much in the future.

Venison, grain-fed beef, and fruit may become more significant enterprises in the future. More focus is being placed

Value of Agricultural Imports, 1990/91¹

	<i>Total imports</i> \$ mil. ²	<i>U.S. share</i> %
Selected products		
Beverages	56.2	1
Chocolate preparations	22.7	3
Fruit preparations	39.6	5
Grains	44.4	42
Grapes	7.4	68
Nuts	6.2	28
Oranges	6.7	11
Raisins	3.9	76
Seeds	15.7	54
Sugar and confectionery	66.8	3
Vegetable oils	26.4	5
All agricultural products ³	621	13

¹ July/June.

² Values are in U.S. dollars at U.S.\$1=1.69 New Zealand dollars.

³ Includes products not listed.

on adding value to agricultural commodities. This trend has been happening with sheep meat and wool and it is likely to become more common in the forestry sector.

Farm and food policy

Agricultural production is export-oriented and market-based. Since the mid-1980's, the Government has removed itself from direct and most indirect assistance to the agricultural sector, putting it strictly on a free market basis.

Producer boards play a major role in New Zealand's agriculture. The Dairy Board, Apple and Pear Board, and Kiwifruit Marketing Board all serve as single sellers, controlling the exports of their respective products. These boards are basically farmer owned with no Government support. The Meat

Producers Board does not serve as the sole exporter but does play a very key role in exports. The Wool Board abandoned its stabilization role following the collapse of wool prices in late 1990.

In the forestry area, most native forests are protected from cutting. Among the commercial forests, which consist mainly of imported pine varieties, the Government is selling many of its holdings to let the private sector manage and harvest these forests.

Trade trends

New Zealand is a net agricultural exporter, with sales of \$5.5 billion in 1990/91 (July-June), versus imports of \$621 million. Export receipts have shown little movement for 3 years, reflecting stable exchange rates and steady production levels.

The dairy industry has continued to expand its milk powder processing capacity to increase powder exports. Beef exports are also recovering from the recent lows. Wool exports are down but the Wool Board has significant stocks to clear when markets recover.

Imports, too, have remained steady. New Zealand continues to buy products like sugar and tropical fruits which it does not produce. New Zealand remains a net importer of grain following the decline of its own cropping sector.

Horticultural exports now exceed \$600 million a year. Apples and kiwifruit make up 38 percent by volume and 75 percent by value of these shipments. Squash, asparagus, peas, onions, berries, seeds, and preparations of fruit and vegetables also figure significantly in export sales, which have increased in recent years.

A noticeable increase in Australian packaged goods for sale by retailers illustrates the growing impact on the economy of the Closer Economic Relations Agreement (CER). About 40

percent of New Zealand's agricultural imports come from Australia. Trade between the two countries is now generally duty free.

After Australia, the United States is the second largest supplier of agricultural products to New Zealand. The United States currently supplies about 50 percent of the country's grain imports, mostly wheat.

Trade policy and prospects

Tariffs are New Zealand's main form of protection for its agricultural sector. Tariff reduction began in the mid-1980's with a policy to reduce tariffs by up to 50 percent by July 1993, with additional yearly reductions planned through 1996.

Strict plant and animal health regulations provide protection from imports of many products, including grains, livestock, poultry, and horticultural products. Import prohibitions apply for live sheep, pork meat, fresh poultry meat, uncooked poultry products, and certain fruits and vegetables, particularly table grapes, stone fruits, nectarines, and peaches.

New Zealand and Australia have entered into a "Closer Economic Relations" agreement which has led to the elimination of all tariff and nontariff barriers between the two countries. New Zealand also gives tariff preferences to certain goods from Canada and imports from Pacific islands and other developing countries. Duty-free tariff treatment for imports from Australia and reduced tariff rates for other countries pose a barrier to imports of a number of U.S. products.

New Zealand has a major interest in the outcome of the multilateral trade negotiations currently being conducted under the auspices of the General Agreement on Tariffs and Trade (GATT), particularly in the elimination of export subsidies and increased market access for its products. ■

Nicaragua

Profile of agriculture

Nicaragua's most important economic sector is agriculture, based mainly on coffee, grains, sugar, cotton, bananas, beef, livestock, forestry, fisheries, and nontraditional crops. The main agricultural areas are located in the Pacific plain. Agriculture accounts for one-fourth of Nicaragua's gross domestic product and nearly three-fourths of all exports. Thirty-five to 40 percent of the labor force is engaged in agriculture.

Most of the agricultural sector's value is from crops (61 percent of the total; with 35 percent from export crops, 20 percent from basic grains, and 6 percent from other crops). More than one-third of agricultural value comes from livestock (primarily beef), 3 percent from fishing, and 1 percent from forestry. The agribusiness sector has the greatest potential for growth.

Nicaragua's agricultural sector has been under intense economic pressure. During a severe economic collapse in the 1980's under the previous Government, production and exports of coffee, sugar, cotton, and beef declined sharply. Production of basic grains rose slowly

and imports (donations primarily from the former Soviet Union) grew.

Since the election of a new Government and the lifting of the U.S. trade embargo in February 1990, and the November 1990 designation of Nicaragua as a Caribbean Basin Initiative beneficiary, the economy has begun to stabilize and agricultural production has begun to recover.

Production trends

The 1991/92 coffee harvest is expected to produce 580,000 60-kilogram bags, up 28 percent, primarily as a result of a new renovation program for 35,000 hectares of coffee trees. Steps taken by the Government to revitalize the sector and encourage production include stopping the civil war, increasing credit, removing the state monopoly on coffee exports, and implementing a new program to prevent and control the coffee borer.

Basic grain production in the 1991/92 marketing year (August-July) is expected to increase because of higher plantings and slightly better yields than the previous year. Rice production is forecast to rise sharply as a result of much higher plantings, while white corn and sorghum output are expected to increase at least 10 percent.

Better sugarcane harvesting techniques and improved input use are expected to increase sugarcane production by 12 percent to 3.1 million metric tons. The majority of area harvested in sugar is concentrated in the Pacific zone of the country. Seven mills exist in Nicaragua, which presently are operating at 60 percent of national capacity.

Area planted to cotton in 1991/92 declined because of lower prospective cotton prices, larger rice plantings, and high cotton production costs. Cotton production in the 1991 marketing year (October-September) is forecast at 110,000 bales (480 pounds each).

Banana production has increased steadily over the past few seasons.



Nicaragua at a Glance

Population (1991): 3.8 million

Urban population: 61%

Population growth rate: 2.8%

Per capita income (1990): \$470

Land use: Crops 10%, meadows and pastures 43%, forest and woodland 35%, other 12%

Major crops: Sugarcane, white corn, bananas, rice, sorghum, cotton,

Livestock sector: Beef and dairy cattle, poultry, hogs

Leading agricultural exports: Coffee, beef, cotton, sugar, bananas, sesame seed

Leading agricultural imports: Rice, wheat, vegetable oil, dairy products, tallow, poultry meat, soy meal

Agricultural imports as a share of total imports: 10-15%

U.S. share of total agricultural imports: 50%

Percent of labor force in agriculture: 35-40%

Membership in economic or trade organizations: CACM, FAO, GATT, IABD, IBRD, ICO, IMF, OAS, ODECA

Production levels in 1991 are estimated to have risen 23 percent, and at the same time the quality of fruit has improved. Export value did not increase as expected due to a reduction in international market prices; however, production is forecast to expand further if Nicaragua develops markets in the United States and Europe.

Beef production fell 18 percent in 1990 to 82.5 million pounds. One of the

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production¹		
Bananas	95	117
Coffee	27	35
Corn	221	250
Cotton	29	24
Rice	74	98
Sorghum	63	72
Sugar	240	270

	<i>thous. head</i>	
Livestock numbers		
Cattle	1,450	1,400

¹ Crop years are Oct.-Sept. for coffee, cotton and sugar; Aug.-July for rice, sorghum, and corn; and Jan.-Dec. for bananas and livestock.

Value of Agricultural Imports, 1991

	Total imports \$ mil. ²	U.S. share %
Selected products		
Beans	1.0	0
Dairy products	6.0	0
Malt (barley)	2.0	10
Poultry meat	4.0	85
Rice	12.0	35
Soymeal	3.0	100
Tallow	5.5	100
Vegetable oil	11.0	80
Wheat	11.0	85
All agricultural products³	85.0	50

¹ Estimated from various Nicaraguan Government and U.S. Government trade data.

² Value shown in U.S. dollars at U.S.\$1=5 cordobas.

³ Includes products not listed.

main factors for the reduction in slaughter is the growing practice of smuggling cattle to the neighboring countries of Honduras, Costa Rica, and El Salvador. This activity is more lucrative than selling the cattle to local slaughterhouses in Nicaragua.

Farm and food policy

The Government's goal is to restructure Nicaragua's economy into a market-oriented system, ultimately reducing or eliminating price controls. The Government is committed to stimulating agricultural production and exports in order to increase food supplies and earn much-needed foreign exchange. To achieve these goals, the Government plans to return control of agricultural resources to the private sector and limit its role in agricultural production and marketing (including foreign trade) mainly to providing credit, technical assistance, and sanitary and health regulation.

Some progress has already been made in privatizing or returning to

original owners some meat slaughterhouses and crop and cattle lands.

The private sector has begun to import supplies (inputs) and export products, activities previously under central Government control.

A long-term policy objective is to work with other Central American countries to achieve regional economic integration through commercial and scientific exchanges, and to coordinate agricultural policies.

Trade trends

Nicaragua is a net agricultural exporter. In 1990 exports totaled \$260 million of agricultural products, and imports were estimated at \$80 million. Nicaragua's agricultural exports increased about \$44 million from 1989 to 1990, led by renewed sugar exports to the United States, and higher beef export volume and prices.

Coffee has been the major export crop in recent years, providing about 29 percent of total export earnings in 1990, down from 47 percent in 1988. In 1992, Nicaraguan coffee exports are expected to increase more than 40 percent to 560,000 60-kilogram bags.

The Nicaraguan cattle/beef industry is facing difficult problems because of high taxes, low prices, and unresolved issues of land and cattle ownership. About 90 percent of all the beef produced is exported to Canada, Mexico, and Japan.

Sugar is another major export crop. Despite the fact that Nicaragua has among the most modern sugar mills in Central America, high production costs and labor problems are causing production and export difficulties. Nicaraguan refined sugar exports in 1992 are forecast at 150,000 tons.

Nicaragua's agricultural imports in 1991 increased, primarily because of a \$28 million food-donation program from the United States that included wheat, rice, soymeal, and soybean oil. U.S. commercial exports of wheat, rice,

barley malt, tallow, and poultry meat were also made. Total U.S. agricultural exports to Nicaragua in 1991 reached \$40 million, almost double 1990's level.

The European Community (EC) in 1991 donated small quantities of wheat and vegetable oil and sold barley malt commercially.

Trade policy and prospects

The Government's trade policy objectives are to eliminate or reduce its monopoly over exports and imports and to integrate agricultural trade within the Central American Common Market (CACM).

By late 1991 the Government had ended the state monopoly on exports and private firms could hold export licenses. Coffee, sugar, and beef exports will be largely in private hands in 1992. Special taxes on traditional exports have been abolished and an export promotion law that would streamline exporting procedures is expected to be approved by the National Assembly.

The Government has also committed itself to eliminate quantitative export and import restrictions on all basic grains and reduce tariffs to a maximum of 20 percent in 1992.

Nicaragua has joined its fellow members of the CACM in liberalization of trade for all basic grains within Central America and elimination of import permits (but with a price band system) for basic grain imports from outside Central America.

The Government has also been promoting a policy of increasing non-traditional exports, following the success of a program in 1991 to grow and export melons on a large scale to the United States. Other nontraditional crops under study for export to the North American and European markets include asparagus, red grapefruit, raspberries, and ornamental flowers. ■

Nigeria

Profile of agriculture

Located on the west coast of Africa, Nigeria occupies an area about the size of California, Nevada, and Arizona combined. Its terrain ranges from tropical forests to open woodlands, grasslands, and semi-desert.

Yams and cassava are grown throughout the country. Nigeria also produces cocoa, sugarcane, palm oil, sorghum, millet, corn, rice, wheat, livestock, peanuts, fruits, vegetables, tobacco, rubber, and cotton. In the south, yams and cassava dominate the diet, and in the north, sorghum and millet are more important.

Swine production is located in the south, while sheep and goats are mainly

raised in the north and middle belts. Poultry, mainly chickens and some turkeys and guinea fowl, is produced throughout the country.

Agriculture accounted for 30 percent of Nigeria's gross domestic product in 1991. Nigeria was once a world leader in production of cocoa, oil palm, and peanuts, but after the country began to export oil in the 1960's, agriculture's role in the economy fell sharply.

The vast majority of Nigeria's crops are produced on small, labor-intensive farms which employ 54 percent of the labor force.

Production trends

Food production has not been able to keep pace with rapid population growth over the past decade. Although farmers are protected by import bans on most grains and all vegetable oils, and land resources are more than adequate, growth is limited by the lack of modern infrastructure and inputs, and poor soils.

Cassava production has increased rapidly since 1988 as a result of the adoption of disease-resistant varieties. Rice production also appears to be on the upswing, due to high prices and cultivation in low-lying areas with good soil moisture, supplemented by tubewell irrigation in the north.

Areas planted to corn have remained fairly stable. Output is dependent on adequate rainfall. Use of hybrid varieties is increasing. Sorghum area is also stable, although corn sometimes successfully competes with sorghum. In part this occurs because sorghum is priced higher than corn, but sorghum has not benefitted from variety improvement efforts so farmers can often obtain better returns from corn.

Efforts to increase wheat production have clashed with the reality that Nigeria's climate is not appropriate for this temperate crop. In addition, Government-promised support to farmers was inadequate to make the crop remunerative despite extremely



Nigeria at a Glance

Population (1991): 88.5 million

Urban population: 30%

Population growth rate: 2.1%

Per capita income (1991 est.): \$280

Land use: Crops 34%, meadows and pastures 23%, forest and woodland 15%, other 28%

Major crops: Cassava, yams, sorghum, millet, corn, oil palm, rice, peanuts, cocoa, sugarcane, cotton

Livestock sector: Poultry, sheep, goats, beef and dairy cattle, hogs

Leading agricultural exports: Cocoa, rubber, oilseed meals

Leading agricultural imports: Sugar, milk powder, tallow

Agricultural imports as a share of total imports: 5%

U.S. share of total agricultural imports: 8%

Percent of labor force in agriculture: 54%

Membership in economic or trade organizations: AFDB, ANRPC, ECOWAS, FAO, GATT, IBRD, ICCO, IDA, IDB, IMF, OECD, OPEC, UNCTAD, WFC

Agricultural Production¹

	1990/91	1991/92
	<i>thous. metric tons</i>	
Crop production²		
Cassava	24,000	26,000
Cocoa	155	160
Corn	1,520	1,850
Cotton lint	36	42
Millet	2,300	2,600
Peanuts	250	220
Rice, milled	540	570
Rubber	65	65
Sorghum	2,800	3,300
Soybeans	65	78
Sugar, refined	59	60
Vegetable oil	755	795
Wheat	50	40
Yams	13,000	13,000

	1989	1990
	<i>mil. head</i>	
Livestock numbers³		
Beef and dairy cattle	12.0	12.1
Hogs	1.4	1.5
Poultry	130.0	132.0
Sheep and goats	32.0	35.0

¹ Unofficial estimates.

² Production seasons vary.

³ Ending year inventories.

high Nigerian wheat prices.

Oil palms are the main source of vegetable oil. The oil palm industry has undergone some renovation in recent years with the development of several new plantations. However, most fruit is still harvested from wild trees.

Since the mid-1980's, cotton production has been increasing as a result of the relatively strong demand by the domestic textile industry and high import duties imposed in 1987. Substantial

Value of Agricultural Imports, 1990¹

	Total imports \$ mil. ²	U.S. share %
Selected products		
Animal oils and fats	1.9	98
Beverage concentrates	3.6	95
Cotton waste	4.4	1
Malt extracts	1.9	16
Milk powder	26.5	0
Sugar, raw	7.4	0
Sugar, refined	102.5	0
Tobacco, not stripped	4.2	75
All agricultural products³	435.9	8

¹ Official imports.

² Values are shown in U.S. dollars at U.S.\$1=9.86 naira.

³ Includes products not listed.

investment has gone into large-scale cotton production and small farmers have adopted more input-intensive practices and received the benefit of extension efforts by the major cotton purchaser.

Modern poultry production appears to have stabilized or even increased slightly in 1991, following 7 years of decline which resulted from a ban on corn imports in 1984 and decreased demand due to declining consumer incomes. The poultry industry is operating at one-fourth of its 1984 level.

Farm and food policy

The Government's basic goals for agriculture are food security (rather than complete self-sufficiency), affordable food prices for Nigerian consumers, and creation of rural employment to stem migration to urban areas.

Prior to 1992, the Government had banned the importation of corn, wheat, rice, malting barley and malt, vegetable

oil, meat, and poultry in order to encourage domestic production. As a result of the import bans, domestic prices of wheat, palm oil, rice, and corn skyrocketed to two to five times world levels. Even the prices of such traditional foods as cassava and yams jumped.

Because of high prices and/or scarce supplies of raw materials, which resulted from the import bans, the utilization of flour and feed mills and modern poultry farms has dropped to only a small portion of their production capacity. The large brewing industry has had to switch from malting barley and malt to corn and sorghum.

Other policy measures directed toward agriculture include sectorial lending requirements for banks, the construction of small- and medium-scale grain storage facilities as a part of a strategic grain-reserve program, fertilizer subsidies, crop insurance programs, construction of irrigation projects and rural feeder roads, and research and extension programs. Agricultural credit availability remains a problem. Fertilizer subsidies have been cut 47 percent for 1992, although availability of fertilizer has increased. Encouraged by subsidies, more farmers are insuring their crops.

Most food is marketed in open-air markets or roadside stands. Small grocery stores serve some wealthier urban dwellers.

Trade trends

Nigeria is a net agricultural importer with exports of \$197 million versus imports of \$436 million in 1990. In addition, substantial quantities of wheat flour and rice (valued at \$160 million in 1991), and other products enter Nigeria informally. The official amount of wheat, flour, and rice now entering the country is far below imports prior to the 1987 ban. Nigeria imported as much as \$45 million worth of corn and \$300 million worth of rice in 1981 and \$260

million worth of wheat in 1984.

Nigeria's major legal agricultural imports are sugar, milk powder, tallow, and tobacco. The Government waived the vegetable oil import ban in October 1991 and \$50-\$60 million worth of imports are expected to have entered the country by mid-1992.

The United States is an important supplier of tallow, tobacco, and beverage bases. The United States was the dominant supplier of food and feed grains to Nigeria prior to the import bans. The United States continues to be an important supplier of wheat and wheat flour to Benin, Cameroon, and Togo, which act as entrepôts for informal entry of flour into Nigeria.

Nigeria's main exports are cocoa, rubber, oilseed meals, hides and skins, cashews, coffee, and peanuts.

Trade policy and prospects

Nigeria has adopted a protectionist policy in agricultural trade by banning imports of most grains, fruits, vegetables, meat, poultry products, and vegetable oil. Agricultural products which are not banned outright are subject to prohibitive tariffs. The goals of this trade policy are to conserve foreign exchange resources and promote domestic production of agricultural products. The policy has had limited success in cutting the food import bill and increasing output of certain agricultural products. However, Nigerian consumers and agribusiness have had to contend with higher food, feed, and fiber prices, and the shutdown of once-dynamic agricultural industries.

The new policy emphasis on food security and affordable prices may portend the lifting of import bans on certain commodities, including wheat, rice, and malting barley. ■

Profile of agriculture

Norway covers an extensive land area of 323,877 square kilometers, but the area devoted to agriculture corresponds to only about 3 percent of the total. About a fourth of the land is forested while much of the rest is mountains and lakes.

While much of the country lies above the Arctic Circle, the influence of the Gulf Stream on weather affecting much of the country allows farming in virtually all parts of Norway.

While Norway's principal agricultural areas lie in the central and eastern portions of the country, small farms are nonetheless scattered across the entire country, providing a livelihood to many small communities. Because of the long winter and short summer, Norway is strongly geared towards animal production, which today counts for about two-thirds of farm income.

Milk is the most important agricultural product throughout Norway, while grain is mainly grown in the middle and eastern parts of the country. The most

important grains are barley, oats, and wheat.

Fish farming, especially of salmon, is a large domestic and export industry. Forest products, including pulp and lumber, is also an important industry.

Production trends

Self-sufficiency remains Norway's overall national agricultural objective. The country has met its self-sufficiency objective in milk products, meat (beef, pork, sheep, and poultry), feed grains, potatoes, and eggs. However, the overall self-sufficiency rate is only about 50 percent.

The Norwegian grain crop of 1.45 million tons harvested in fall 1991 was somewhat lower than in 1990. Barley is the principal grain, followed by oats, and wheat (245,000 tons). Grain quality was judged excellent in 1991, with 94 percent of the wheat rated "quality" wheat. While Norway will be self-sufficient in feed grains in 1991/92, imports of bread wheat will still be necessary.

Meat production in Norway is exclusively directed at the domestic market. Meat consumption has been relatively stable at around 200,000 tons, divided between beef, pork, mutton, and poultry. Meat production is regulated by quotas and there is little surplus production. Milk production stood at around 1,877,000 tons in 1991, only slightly below the production target of 1,880,000 tons set by farmers' organizations and the Government.

Farm and food policy

Although the agricultural sector accounts for only 3 percent of the total population, agricultural policy has been the focus of rather widespread discussion during the past year. Norwegian farming has been highly subsidized and protected for years. The results have been surpluses of many products at costs far above international levels.

Norwegian agriculture remains



Norway at a Glance

Population (1990): 4.25 million

Urban population: 70%

Population growth rate: 0.6%

Per capita income (1990): \$21,502

Land use: Crops 3%, meadows and pastures negligible, forest and woodland 27%, other 70%

Major crops: Barley, oats, wheat, silage, forestry

Livestock sector: Beef and dairy cattle, hogs, mutton, poultry—layers and broilers

Leading agricultural exports: Cheese, fats and oils, forest products, hides and skins

Leading agricultural imports: Lumber, fruits, vegetables, coffee, sugar, soybeans, grain, tobacco, nuts

Agricultural imports as a share of total imports (1990): 7%

U.S. share of total agricultural imports (1990): 7%

Percent of labor force in agriculture: 4%

Membership in economic or trade organizations: CCC, EFTA, GATT, IBRD, ICAC, ICO, IDA, IFAD, IFC, IMF, IWC, OECD, WSG

Agricultural Production¹

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production		
Berries ¹	21	15
Fruits ¹	43	26
Grains	1,165	1,541
Potatoes	500	509
Root crops	151	179
Vegetables	114	115

Livestock numbers

	<i>thous. head</i>	
Cattle		
Beef	611	620
Dairy	339	333
Hogs	712	708
Poultry	3,791	3,763
Sheep	2,232	2,211

¹ Commercial production.

protected from international competition by quantitative restrictions on imports of various products, as well as outright bans on imports of products for which Norway aims at self-sufficiency. Rural development, self-sufficiency, and the discouragement of excessive migration into urban areas have been

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Canned fruits	34	1
Cocoa	21	0
Coffee	94	0
Cotton	2	2
Fruits and nuts	199	34
Lumber	18	16
Soybeans	75	38
Sugar	82	0
Tobacco	25	12
Vegetables, fresh	71	3
Vegetables, preserved	34	3
Veneer	90	3
Wheat	35	4
All agricultural products ²	1,816	134

¹ Values are shown in U.S. dollars at U.S.\$1=6.29 kroner.

² Includes products not listed.

the principal factors behind these agricultural policies.

While overall food security and income support to the rural population will undoubtedly continue to be prominently featured in domestic food policies, a variety of factors are beginning to produce changes in agricultural policy. These factors include internal budget and economic development pressures, trade reforms that may be adopted in the General Agreement on Tariffs and Trade (GATT) multilateral trade negotiations, and the ongoing negotiations between the European Free Trade Association (EFTA)—of which Norway is a member—and the European Community (EC).

Norwegian farmers have strongly resisted new agricultural policies that would be required to bring Norwegian agriculture into compliance with GATT and/or the EC Common Agricultural Policy (CAP) reform proposals.

However, the Norwegian Government in general seems to realize that adjustments will be necessary and has undertaken initial steps to plan for a more competitive Norwegian farming system that is based less on price supports and more on direct payments to farmers. As a start, Norway in 1991 cut grain prices paid to the farmers by \$60 a metric ton and commenced a "dairy buyout" program to entice farmers away from this agricultural sector.

Negotiations between the EC and Norway have focused on access for approximately 70 products, all but 10 of which currently enjoy access. Those 10 for which Norway will have to plan access include lettuce, cucumbers, cherries, plums, onions, fresh and canned strawberries, tomatoes, and cut flowers. Alignment of Norwegian phytosanitary regulations with EC regulations could result in more open access for U.S. waxed apples and pears.

Trade trends

Norway is a net importer of agricultural products, buying large quantities of sugar, bread wheat, oilseeds, fruits, and vegetables, together with other products not produced in the country because of the climate. Imports totaled approximately \$1.8 billion in 1990, versus exports of roughly \$643 million.

A little more than half of Norway's imports of agricultural products consist of consumer-oriented high-value products. Most of the latter are horticultural and tropical products, including fresh fruits (oranges, bananas, apples, and grapes), nuts, fruit and vegetable juices, fresh vegetables, chocolate and

chocolate products, wines, plants, cut flowers, and foliage. The top 10 suppliers of this group of products are the Netherlands, Denmark, Sweden, Spain, Germany, the United States, Italy, France, Israel, and Switzerland.

The U.S. share of Norway's agricultural trade stands at 7 percent for imports and 5 percent for exports. The bulk of U.S. exports to Norway consists of soybeans, leaf tobacco, raw cotton, grains, fruit, and nuts, while U.S. imports from Norway are made up of cheeses, fats, and edible oils.

The best future market prospects in Norway include rice, tropical products, fresh vegetables, and a full range of high-value products (fresh, frozen, microwaveable, and canned foods).

Norway's retail grocery trade is highly diversified, and includes independent grocers, consumer cooperatives, and chains, some of which are operated by wholesalers. The role of wholesalers in distribution is growing.

Trade policy and prospects

Norwegian agricultural products most insulated from international competition include milk products, meat, berries, fruit, and vegetables. Imports are controlled through quantitative restrictions, state trading, import calendars, licensing, health and sanitary regulations, and a minimum import price system. The Norwegian Grain Corporation (NGC) exercises exclusive control of imports of all grains and feed concentrates. Import licenses are required for berries, fruits, and vegetables. Norway also imposes monopoly controls on imports of alcoholic beverages.

Although such import policies make Norway a difficult market to penetrate, opportunities do exist. ■

Pakistan

Profile of agriculture

The north of Pakistan boasts the world's highest mountains, the Himalayas. Another highland region exists to the southwest. The Indus River flows south from the Himalayas through a vast, fertile, densely populated flood plain in the east. The southeastern part of the country is largely barren desert. Twenty-six percent of the land is arable. Over 13 million hectares are irrigated—the largest irrigation system in the world. The climate is continental, with enormous temperature variations from the

mountains to the plains.

Agriculture in Pakistan is the largest single sector of the national economy. It accounts for 26 percent of the country's gross domestic product and together with agriculture-based products contributes to 80 percent of the country's total export earnings. About 40 percent of the labor force is employed in agricultural production.

Pakistan's agricultural sector is gradually making the difficult transition from a subsistence to a commercial structure, with the proclaimed goal of self-sufficiency. Of the 4 million farms, 97 percent are taking advantage of production-related incentives to slowly improve.

Low, subsidized prices are encouraging exports of products in which Pakistan is not self-sufficient. Most exports flow to neighboring countries where prices are higher. Imports have increased to meet rapidly growing consumption, in part caused by a 3.1-percent population growth and in part as a result of a 10-percent rise in personal incomes since 1989-90. Pakistan must soon increase agricultural productivity to contain the increasing costs of importing food.

Production trends

As the food gap widens, the outlook for Pakistan's agricultural sector is causing considerable concern. Given that nearly all cultivable land is fully cropped, the country's agricultural output can only be increased with advances in yields and productivity.

Pakistan's two cropping seasons are summer and winter. Rice, cotton, corn, and sugarcane are the main summer crops, while wheat, pulses, tobacco, and rapeseed are the main winter crops. The crop sector has a key position because of its contribution to roughly two-thirds of food and fiber output.

The performance of the agricultural sector hinges, in large part, on the output of cotton and to a lesser extent on wheat



Pakistan at a Glance

Population (1991): 113.8 million

Urban population: 33%

Population growth rate: 3.1%

Per capita income (1991): \$410

Land use: Crops 26%, meadows and pastures 6%, forest and woodland 4%, other 64%

Major crops: Sugarcane, corn, rice, cotton, wheat

Livestock sector: Buffalo, cattle, goats, poultry, sheep

Leading agricultural exports: Cotton and textiles, fish and fish preparations, leather and leather manufactures, rice

Leading agricultural imports: Edible oil, sugar, tea, wheat

Agricultural imports as a share of total imports: 14%

U.S. share of total agricultural imports: 25%

Percent of labor force in agriculture: 40%

Membership in economic or trade organizations: ADB, ASEAN, FAO, GATT, IBRD, ICAC, IDA, IDB, IMF, IRC, IWC, SAARC, UNCTAD, WFC

and rice. During the past decade, cotton and wheat showed the greatest production increases, due almost entirely to improved yields. The area planted to the five main crops has changed very little in the past 10 years, with only a slight decrease in coarse grains area and an increase in land planted to cotton, wheat, and rice.

Farm and food policy

Pakistan's farm policy has five goals:

Agricultural Production

	1990/91	1991/92
	<i>thous. metric tons</i>	
Crop production		
Corn	1,185	1,200
Cotton	1,637	1,786
Cottonseed	3,274	3,572
Pulses	801	815
Rapeseed and mustardseed	228	230
Rice	3,265	3,250
Sugarcane	35,939	37,414
Wheat	14,300	14,500

	<i>mil. head</i>	
Livestock numbers¹		
Buffalo	17.8	18.3
Cattle	17.7	17.7
Goats	37.0	38.6
Poultry	146.9	163.8
Sheep	26.3	27.0

	<i>thous. metric tons</i>	
Animal product output		
Beef	765	803
Eggs ²	4,490	4,914
Milk	15,481	16,280
Mutton	665	713
Poultry meat	151	169

¹ Marketing years are Aug.-July for cotton; Oct.-Sept. for rice, corn, sugarcane, rapeseed, mustardseed, and cottonseed; May-April for wheat; Sept.-Aug. for pulses; and July-June for all livestock and products.

² Million eggs.

Value of Agricultural Imports, 1990/91

	Total imports \$ mil. ²	U.S. share %
Selected products		
Edible oils	401.9	31
Forestry products	8.3	1
Fruits	26.9	0
Milk and products	31.1	0
Pulses	32.3	0
Seeds and plants	21.3	9
Sugar	160.0	0
Tallow	26.2	45
Tea	165.8	0
Wheat	141.5	89
Wool	18.9	0
All agricultural products	1,066.6	25

¹ July-June.

² Values are shown in U.S. dollars at U.S.\$1=22.42 rupees. Includes commercial and concessional imports.

self-sufficiency, enhanced productivity, export orientation, sustainable agriculture, and social equity. Faced with the rising costs of food imports, the Government's main priority is to enhance domestic agricultural productivity.

In light of this Government priority, a package of incentives for increasing farm production and for the development of various agricultural subsectors was announced during 1991. These included concessions on both machinery imports and certain poultry feed ingredients. The monetary incentives mainly were comprised of revisions in credit ceilings and in the scope of production loans; crop, livestock, and tree insurance; penalties on pesticide and fertilizer adulteration; special projects in rain-fed areas; credit facilities for land earmarked for forestry planting; and provision of continuing and nontransferable funds for agricultural research and extension.

Food policy aims to achieve specific production targets supported by minimum price supports, ensure adequate returns to farmers, accelerate the pace of development, and implement a program to alleviate poverty in the rural areas.

The lack of adequate modern food processing, preservation, and distribution systems are primary causes for low retail market prices and low returns to producers. Also, the spoilage of perishable foodstuffs significantly reduces the availability of food to a growing urban population. Marketing of poultry, milk, vegetables, and fruits is especially hampered by the lack of grading and inspection services.

Trade trends

Pakistan is a net importer of agricultural commodities, with a two-way trade officially valued at just over \$2 billion. In recent years, the agricultural trade deficit has grown because imports have been needed to meet the nation's steadily rising food requirements.

The leading import commodities are edible oils, wheat, tea, and sugar, which together account for more than 80 percent of food, fiber, and forestry imports.

Pakistani exports of rice, cotton, and textiles help to balance the rising import costs of wheat, sugar, and edible oils. About 20 percent of Pakistan's total exports are raw agricultural commodities. Another 40 percent are manufactured agricultural goods or value-added items such as textiles, leather goods, carpets, and fish products. Rice exports, valued at between \$200 and \$300 million, have been fairly stable during the past few years. Raw cotton exports had been rising from 1984 at an annual rate of nearly 3 percent until 1989 but started declining in 1990. In 1991, raw cotton exports were valued at \$412 million. Value-added textile exports are now about 10 times larger than they were 10 years ago.

The country is exploring possibilities for exporting poultry, vegetables, and fruits. The United States is Pakistan's leading trading partner, providing most of the imported wheat and a significant share of Pakistan's tallow and imported seeds. U.S. day-old chicks for breeding continue to be purchased by Pakistan's thriving poultry industry.

Other major supply sources for Pakistan are Malaysia, Kenya, Australia, China, and the European Community.

Trade policy and prospects

High tariffs and import taxes levied on imported goods are a major source of federal income in Pakistan. With only a few exceptions, this fiscal policy extends to all agricultural and forest products. The exceptions are wheat, pulses, corn, and soybean meal which are imported duty free. This policy helps minimize retail prices of these commodities whose prices and supplies are considered sensitive. Tea, sugar, tallow, and edible oils are major import items which continue to be assessed high tariffs and import charges.

Economic reform under the current Government has increased direct private participation in imports of wheat, edible oils, and fertilizer, all of which were previously purchased and then resold by state import monopolies. Importation of many other agricultural products is handled by private traders. Items of interest to U.S. exporters are seeds, vegetable oil, wheat, tallow, and live chicks. As an Islamic republic, Pakistan bans the imports of pork and alcoholic beverages.

Exports of cotton and rice are still regulated to maximize foreign exchange earnings and insure adequate domestic supplies.

Import tariffs on agricultural commodities are occasionally reduced to meet supply shortfalls. Tariffs serve to protect subsidized domestic industries. ■

Panama

Profile of agriculture

Agriculture in Panama represents the second most important sector of the local economy, generating 12 percent of the gross national product and accounting for 25 percent of the work force.

Agriculture is an expensive enterprise where high energy, labor, and equipment costs prevail in this dollar-based economy. The future role of agriculture

in this traditionally services-dominated economy will depend on how well local producers adapt to trade liberalization policies and economic integration processes in Central and North America.

Large-scale production of agricultural commodities and livestock dominates in the south central and western provinces. Coffee plantations and smaller scale vegetable and fruit farms predominate in the highland areas (above 1,000 meters) of the mountain range which divides the country between the Pacific Ocean and Caribbean Sea. Subsistence agriculture and livestock operations are evident in the largely inaccessible jungle province of Darien in the eastern half of the country.

Tropical fruits, vegetables, shrimp, and the livestock industry offer promising opportunities for trade and investment in Panama. Private sector and Government-led efforts to diversify agricultural exports and seek new markets in the United States, Central America, and Europe will direct agricultural production in the years ahead.

Production trends

Production increases in recent years have resulted from an agricultural policy based on high Government-controlled support prices and on trade restrictions. As Panama moves towards trade liberalization and revision of its agricultural production policies, farmers and ranchers must seek production efficiencies and product diversification.

Bananas, shrimp, fish, sugarcane, coffee, rice, and corn are Panama's most important agricultural products. Banana production, located on the Caribbean and Pacific coasts near the Costa Rican border, is projected to rebound in 1992 following heavy earthquake and flood damage to plantations, processing plants, and ports in 1991.

Shrimp represents the second most important agricultural export with a total production of 4,888 metric tons in 1990. Brackish water shrimp account for 80



Panama at a Glance

Population: 2.50 million

Urban population: 55%

Population growth rate: 2.6%

Per capita income (1991): \$1,935

Land use: Crops 8%, meadows and pastures 15%, forest and woodland 54%, other 23%

Major crops: Bananas, sugarcane, rice, corn, shrimp, coffee, beef, dairy products, beans

Livestock sector: Beef and dairy cattle, poultry, hogs

Leading agricultural exports: Bananas, sugar, shrimp, coffee, cocoa, fishmeal and oil, beef, melons

Leading agricultural imports: Wheat, soybean oil, malt, corn, fruit juices, apples, corn gluten, grapes

Agricultural imports as a share of total imports: 13%

U.S. share of total agricultural imports: 49%

Percent of labor force in agriculture: 25%

Membership in economic or trade organizations: CACM, FAO, GATT, ICCO, ICO, IMF, OAS, ODECA, SELA, UPEB

percent of the country's production, whereas the remaining 20 percent is produced on 10,000 acres of shrimp farms. Declines in brackish water shrimp production (due to poor oceanographic conditions and high capture rates) will be balanced by increases in the size of shrimp farms over the next several years.

Sugarcane continues to be an important crop, ranking as the third

Agricultural Production

	1989	1990
	<i>thous. metric tons</i>	
Crop production		
Bananas	1,253.6	1,264.7
Beans, red	5.1	4.3
Beans, kidney	2.0	2.6
Cocoa	1.4	0.6
Coffee	9.8	10.9
Corn	90.3	93.8
Fish	206.1	142.5
Fish oil	17.7	8.1
Fish meal	33.5	22.9
Melons	7.6	11.8
Rice, paddy	207.2	216.1
Shrimp	10.5	6.7
Sorghum	30.4	23.1
Sugarcane	110.7	112.7
Tobacco	1.8	1.8

Animal product output

	1989	1990
	<i>thous. metric tons</i>	
Beef and veal	57.2	62.5
Eggs ¹	215.5	214.5
Milk ²	114.2	127.9
Pork	9.7	10.3
Poultry meat	24.0	25.8

Livestock numbers

	1989	1990
	<i>thous. head</i>	
Cattle	1,416.6	1,379.3
Beef	1,334.1	1,293.3
Dairy	82.5	86.0
Hogs	202.0	226.3
Poultry	6,700.9	6,916.9

¹ Million eggs.

² Million liters.

Value of Agricultural Imports, 1990

	<i>Total imports</i>	<i>U.S. share</i>
	<i>\$ mil.¹</i>	<i>%</i>
Selected products		
Apples	3.7	70
Beans	2.6	96
Corn	5.9	100
Corn gluten	3.4	82
Grapes	3.0	77
Juice concentrate	5.9	90
Malt	6.8	1
Soybeans	1.1	99
Soybean oil	12.0	11
Wheat	15.6	100
All agricultural products²	192.0	49

¹ Values are in U.S. dollars at U.S.\$1=1 balboa.

² Includes products not listed.

largest agricultural export. Production is located in the central provinces. The future of sugar as a viable crop is uncertain as the private sector mills are beginning to diversify their operations to include shrimp farming and rice production. Developments related to the U.S. sugar import quota will directly influence the outlook for the sugar industry in Panama.

Coffee plantations are located primarily in the central and western mountains. Coffee production in Panama will continue to shift to larger plantations as smaller producers exit the industry or switch to alternative crops such as plantains and vegetables.

Rice and corn are the two most important grain crops. Although Panama is considered self-sufficient in rice production, imports may occur in 1992 to compensate for a severe drought in 1991.

Commercial (feed) corn is produced primarily in the central provinces, but new production areas are emerging in

the Darien province. Approximately half of total corn production is green or new corn, which is used to make the popular tortilla.

Farm and food policy

For years, the Government has played a direct role in setting agricultural policy through price supports, price controls, import quotas, permits, and high import tariffs. Now, however, there is a move toward a market-based agricultural economy. Production goals and efficiencies will be met based on the initiatives of private sector investors, and by the extent that the Government and financial sectors facilitate agricultural loans and guarantees. The unavailability of financing has restricted agricultural development in recent years.

The food marketing and distribution system is fairly well developed, including modern supermarkets and a large wholesale farmers' market in the capital. However, the production centers are located far from populated areas and many producers rely on brokers to market fresh fruits and vegetables.

Trade trends

Panama is a net agricultural exporter. Panama's agricultural exports totaled \$261 million in 1990, compared to imports of \$192 million. Tropical products including bananas, coffee, shrimp, fish, and sugar dominate the export profile. Generally, grains and products (wheat, corn, beans, corn gluten), fruits (apples, grapes, juice concentrates), and vegetable oil, lumber, molding, and a diversity of high-value consumer-ready products are the major products imported.

In recent years, the major markets for Panama's agricultural products have included North America, Western Europe, and Central America. The Government and private sector are actively seeking new markets for nontraditional agricultural products in Europe, Central America, and the

United States. The United States is Panama's primary agricultural trading partner, accounting for 47 percent of Panama's exports and 49 percent of Panama's imports. The United States supplied all of Panama's import requirements for corn and wheat in 1990.

Panama also imports many high-value agricultural products from the United States including many consumer-ready products such as breakfast cereals, canned goods, and generic food product lines.

Imports and exports are constrained by a lack of deep water ports near major population and food processing centers. Imports of wheat and corn and exports of sugar can be limited because of tidal variances and limited port facilities.

Trade policy and prospects

Panama has protected the agricultural sector for many years through imposition of import restrictions until purchases of local crops were guaranteed by the agricultural processing industry. For many products, imports were allowed only when a shortfall in production would lead to food shortages. Additionally, export promotion was limited to the primary tropical products of bananas, sugar, coffee, and shrimp.

During the past 2 years of progress in economic and political reform and development, the Government has been committed to promoting trade and investment in traditional and non-traditional agricultural products. This new trade policy will include lower import duties and an elimination of quotas by 1993 for agricultural imports.

Panama's application for entry into the General Agreement on Tariffs and Trade (GATT) is an indication of its commitment to reforming agricultural trade policies. ■

Paraguay

P

Profile of agriculture

Agriculture plays a critical role in the overall political, economic, and social structure of Paraguay due to the country's basic rural nature, the dominance of agriculture as a livelihood, and the importance of agricultural exports as income generators. In 1991, agriculture accounted for nearly 30 percent of the country's gross domestic product, employed 44 percent of the population, and generated 90 percent of the national export earnings.

Most farmers operate at the subsistence level on small, privately owned farms. Popular crops are corn, dry beans, and manioc for family consumption. Medium and large farmers produce the bulk of the soybeans, wheat, and cattle.

Major crops include soybeans, cotton, corn, manioc, wheat, dry beans, and sugarcane. The livestock sector is comprised predominantly of beef cattle but also includes dairy cattle, hogs, horses, and poultry. The country is largely self-sufficient in basic food

commodities and surpluses are exported. Needed imports generally originate in neighboring Argentina and Brazil.

Situated almost in the center of southern South America, Paraguay is landlocked between Argentina, Bolivia, and Brazil. Access to Atlantic Ocean ports is by river and rail to Argentinian and Uruguayan export facilities, and by roads and rivers to ports in southern Brazil. Agricultural exports are not moved to the Pacific. Soybeans and cotton fiber are the predominant agricultural export commodities. Agricultural conditions range from forests to dry lands. Environmental issues do not yet play a significant role in Paraguayan agriculture.

Production trends

The agricultural sector is based predominantly on soybeans and cotton, with livestock and forestry also important components. Because production outstrips the relatively small domestic demand, international markets are a major factor in local agriculture.

The lack of Government production credit, lack of capital in the hands of farmers, unimpressive international prices, and a stable exchange rate give little reason to expect significant near-term increases in planted area or shifts in commodities, although the potential exists.

Agrarian reform is forcing the opening of new lands which is increasing land clearance and slowly expanding the amount of tillable acres available. The potential for serious soil erosion and related ecological problems resulting from this unmanaged land clearing is one of the more ominous factors facing Paraguayan agriculture.

Soybean production potential continues to increase despite two consecutive poor crops as a result of unfavorable weather.



Paraguay at a Glance

Population (1990): 4.2 million

Population growth rate: 3%

Per capita income (1990): \$1,236

Land use: Crops 21%, meadows and pastures 39%, forest and woodland 35%, other 5%

Major crops: Corn, cotton, rice, soy beans, sugarcane, wheat

Livestock sector: Beef and dairy cattle, hogs, horses

Leading agricultural exports: Soybeans, cotton, beef, essential oils, forest products

Leading agricultural imports: Processed fruits and vegetables, livestock genetics, whiskey, cigarettes

Agricultural imports as a share of total imports (1990): 9%

U.S. share of total agricultural imports (1990): 22%

Percent of labor force in agriculture: 44%

Membership in economic or trade organizations: ALADI, ABUP, IBRD, IDA, IDB, IFAD, IMF, OAS, SELA

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Corn	1,000	980
Cotton, lint	225	260
Soybeans	1,575	1,300
Sugarcane	2,255	2,200
Tobacco	4	4
Tung	163	165
Wheat	375	300

	<i>mil. head</i>	
Livestock numbers		
Cattle		
Beef	8.3	8.4
Dairy	0.6	0.6
Hogs	2.4	2.5
Horses	0.3	0.3
Poultry	17.0	17.5
Sheep	0.5	0.5

Soybeans have traditionally moved to the export market. In the past 2 years, however, notable investment has been made in infrastructure, including new and expanded soybean crushing plants, and construction of several new grain export facilities. These will boost the competitiveness of Paraguay's exports.

Cotton production will continue to fluctuate with local market prices but significant growth is unlikely. The importance of cotton as the only real

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Cigarettes	18.0	99
Confectionary products	2.3	3
Fruits	0.9	6
Milk products	4.1	³
Other drinks	7.9	4
Processed foods	0.5	³
Wheat	0.6	0
Whiskey	37.5	1
Wines	2.6	1
All agricultural products ²	103.3	22

¹ Values are in U.S. dollars at U.S.\$1=1.225 guaranis.

² Includes products not listed.

³ Less than 2 percent.

cash crop option of the innumerable subsistence level farmers is not likely to change in the near term. The Government has recently looked to the private sector to provide more of the needed production and marketing resources. Cotton production is dependent on the supply of manual labor. There is little mechanized production.

Production in the livestock, dairy, and forestry sectors is relatively stable and will be influenced largely by foreign market opportunities in neighboring Brazil and Argentina and beyond.

Farm and food policy

To maintain producers in rural areas, the Government attempts to influence producer prices, mainly for cotton, by providing some financial incentives for the private sector. With reduced financial resources, the Government has tried to shift the burden of financing agricultural production and marketing to the private sector. Several successive years of poor crops, low world prices,

and a stable exchange rate, however, have left the important export-oriented soybean and cotton sectors in difficult financial conditions.

Local input and commodity markets are free of Government price controls. With the emergence of increased soybean crushing capacity, the Government must now try to balance the conflicting interests of the traditional soybean exporters and those of the local crushers.

Trade trends

The small size of the domestic market and relatively abundant agricultural production enabled Paraguay to maintain a positive agricultural trade balance in 1990 despite an overall trade deficit. Exports of agricultural products declined in 1990 to \$887 million, from \$957 million in 1989, as a result of a reduced soybean crop and lower international prices for the prominent export commodities—cotton and soybeans. Meanwhile, agricultural imports increased from \$65 million to \$103 million. With basic needs met by domestic production, most imports are value-added products, such as whiskey, cigarettes, and beverages. Paraguay also imports large quantities of products for sale in its free trade zone, largely to tourists from neighboring Brazil and Argentina.

Given the nature of Paraguayan imports and the ability of neighboring food industries to satisfy the bulk of the country's processed food needs, imports from the United States account for less than a quarter of total agricultural imports. The leading product from the United States is cigarettes.

The agricultural export sector in 1991 was dominated by cotton exports valued at \$332 million, up 8 percent from 1989. Soybeans followed at \$267 million, down 30 percent from the previous years. Combined, these commodities accounted for 62 percent of total export value.

Other important agricultural exports included beef at \$133 million, wood products at \$38 million, and hides, essential oils, and coffee at \$28 million, \$25 million, and \$21 million, respectively, during 1991.

Trade policy and prospects

Since 1989, Paraguay has moved steadily toward open trade, with a minimum of Government involvement and interference. No official regulatory practices directly apply to imports. Imports occur when shortfalls develop, when prices rise above those in neighboring countries, or when the product is not produced locally. Import permits are not required, although import tariffs do apply in some cases.

The Government has held the rate of its currency devaluation well below the rate of domestic inflation. This policy has facilitated imports and made Paraguayan exports relatively more expensive and less price competitive on the world market.

Paraguay depends heavily on foreign suppliers for the bulk of needed agricultural inputs and on foreign buyers for markets. Both dependencies make exchange rate policies critical to agriculture.

No discriminatory or preferential export policies exist. Paraguay does not subsidize exports, but uses exports as a means of generating tax revenues. The Government supports exports of nontraditional and manufactured products, incorporating added value to domestic or imported raw materials, using local labor, services, and energy resources. Such exports are free from customs duties, exchange restrictions, or surcharges and related taxes. This policy may be of most importance to the forestry sector.

Paraguay is a member of a four-country group moving toward economic integration. The other participants are Argentina, Brazil, and Uruguay. ■

Profile of agriculture

Peru, the third largest country in South America, is about three times the size of California. Most of the land is not arable, being either mountainous, or flat desert plains which lack irrigation water. Agriculture accounts for about 12 percent of the country's gross domestic product and employs roughly 38 percent of the population.

Most of the farm staples of corn, rice,

cotton, sugarcane, and horticultural products are produced in Peru's irrigated coastal valleys. Impoverished indigenous subsistence farmers occupy the Andean highlands, at altitudes averaging over 10,000 feet. Potato and dairy farming are the main activities. Palm oil, forest products, and rice are produced in the remote eastern Amazon jungle basin area, which also has undeveloped tropical forests.

While horticultural production on the Pacific coast has modernized in the past decade, farming in the central mountains and eastern jungles has not changed in 30 years. Crop production accounts for about half of total agricultural output. Potatoes and corn are the most important crops. The dominant livestock product is poultry meat.

Production trends

Peru's agriculture is hampered by repeated droughts, a lack of farm credit, a sluggish economy, bouts of hyperinflation, and a rising number of rural terrorist attacks. Since 1980, the area of land planted has decreased by one-fourth, and crop production has not kept up with population growth. Natural and political disasters have plagued crops and farmers.

Many of the most productive inland agricultural areas have been abandoned by farmers because of rising terrorist violence. The outlook for agriculture is positive in the more secure coastal areas.

Spurred by the Government's new free market economic policies, nontraditional exports of asparagus, mangoes, and other fruit crops are rapidly expanding, aided by duty-free access to the European Community (EC) and the United States under a duty preference system for Andean countries. Such incentives are part of the effort to reduce illegal coca production.

Farm and food policy

After the end of agrarian reform in the 1980's, the Government continued to



Peru at a Glance

Population (1991): 22 million

Urban population: 70%

Population growth rate (1991): 2.1%

Per capita income (1991 est.): \$856

Land use: Crops 3%, meadows and pastures 21%, forest and woodland 55%, other 21%

Major crops: Potatoes, sugarcane, rice, corn, cotton, dry beans, wheat, barley, coffee

Livestock sector: Poultry—broilers and layers, sheep, cattle, hogs, goats

Leading agricultural exports: Fishmeal, cotton, sugar, coffee

Leading agricultural imports: Wheat, corn, rice, processed sugar, soybean meal, soy oil

Agricultural imports as a share of total imports: 20%

U.S. share of total agricultural imports: 30%

Percent of labor force in agriculture: 38%

Membership in economic or trade organizations: Andean Pact, FAO, GATT, IADB, IBRD, ICO, IDA, IMF, ISO, IWC, LAIA, OAS, SELA

Agricultural Production

	1991	1992 ¹
	<i>thous. metric tons</i>	
Crop production		
Barley	80	100
Beans, dried	47	53
Coffee	69	66
Corn for feed	450	500
Cotton, raw	176	158
Potatoes	450	1,200
Rice, milled	545	510
Sorghum	15	35
Sugarcane	550	500

	<i>thous. head</i>	
Livestock numbers		
Alpacas and llamas	3.7	3.6
Cattle	3,630.0	3,510.0
Chickens		
Broilers ²	120.0	117.0
Layers ²	8.3	8.0
Goats	1.7	1.6
Hogs	11,250.0	10,500.0

	<i>thous. metric tons</i>	
Animal product output		
Beef	109	112
Eggs (chicken)	117	110
Lamb, mutton, and goat	27	27
Milk	640	650
Pork	69	70
Poultry meat	263	240

¹ Estimate.

² Millions.

maintain subsidized consumer food prices that caused artificially low farm prices; consequently, agricultural production declined.

Agricultural output finally appears to be recovering in the 1990's with a return to free-market prices and renewed investment in large farm operations.

The current Government hopes to encourage food production and agribusiness by promoting private capital investment, under the 1991 Agricultural

Value of Agricultural Imports, 1991

	Total imports \$ thous. ¹	U.S. share %
Selected products		
Barley and malt	18	0
Corn	80	36
Dairy products	59	29
Meat	25	24
Rice	86	26
Soybean meal	2	15
Sugar	59	29
Vegetable oil	35	20
Wheat	130	21
All agricultural products ²	592	25

¹ Values are shown in U.S. dollars at U.S.\$1=0.95 new soles.

² Includes products not listed.

Law which ended Peru's cooperative farms, and began market-oriented reforms. Encouraged by the U.S. Andean Trade Preference Act, development is focusing on nontraditional products, such as mangos, asparagus, shrimp, and exotic vegetables.

Under these policies, domestic and foreign investment in land and processing plants is growing rapidly. Investors are buying and consolidating small subsistence farms into larger parcels for production of commercial crops using modern technology.

With an increasing problem of water shortages, the Government recently has encouraged farmers on the coast to produce horticultural crops for export which use less water than do sugarcane and rice which is still grown on Peru's northern desert coast. Development efforts in eastern Peru are hampered by terrorist activity.

Following overfishing in the early 1970's of the key anchovy and sardine catch—one of the world's largest—the

Government imposed strict controls on the fish harvest. This policy has successfully maintained a large harvest of over 6 million tons annually.

The Government is limiting fishing rights given to Asian fishing fleets as another step to better manage both the marine environment and maintain the fish stock. In addition, substantial private investment is being made to improve fish meal and oil plants, and to expand plant capacity.

Trade trends

Peru imports over \$500 million worth of farm products each year. Its agricultural trade deficit has grown steadily since the 1970's, when agrarian reform forcibly expropriated the largest and most productive farms throughout the country, and production stagnated.

With imports of \$592 million, and exports of \$295 million in 1991, Peru logged a \$297-million agricultural trade deficit, although this was more than offset by exports of fish and fish products totaling \$533 million. Peru is the world's largest fish meal exporter.

Though Peru remains an important market for bulk commodities, processed food imports have risen rapidly since 1990 with the open market policies of the current Government. Processed food imports are expected to continue to grow in line with demand for imported U.S.-style foods by increasingly affluent urban consumers. Imports of feed grains should grow, as stagnant domestic production cannot meet demand from the expanding poultry industry.

The long-term outlook for imports has steadily improved as the result of the Government's free market policies which have rapidly stabilized a hyper-inflationary economy.

Production of the key field crops has stagnated while population continues to expand. Peru now imports almost all of its wheat and flour (about 1 million tons annually), half its corn supply, and one-third of its rice consumption.

Arabic mild coffee is Peru's largest export. Export sales of nontraditional products such as asparagus, mangos, and shrimp are growing. Peru also exports cotton and small amounts of sugar (though it is now a net sugar importer).

Trade policy and prospects

The Government has vigorously adopted a free market policy with a minimum of Government interference.

Since 1990, Peru has reduced its import duties to two levels (15 and 25 percent ad valorem); eliminated all import restrictions, import quotas, and import/export prohibitions; and subsidized exchange rates. Now all sorts of U.S. processed products—prepared foods, wines, turkeys, sauces, seasonings, and so forth—are freely available in Lima's five large supermarket chains. As long as U.S. exports are price competitive, these items will continue to sell well in Peru, since customers have a preference for U.S.-style foods.

Although wheat and rice imports have grown rapidly as the private sector has taken over marketing of these products, U.S. wheat and rice prices have averaged well above prices from Argentina and Thailand. Despite a depressed economy and competition for capital by large investments in imported capital goods, agricultural imports have reached record levels and are expected to climb still higher as the economy recovers.

Free market forces are raising import prices. Variable farm import duties now assessed widely in Latin America have not significantly reduced import demand, but have boosted farm prices from 10 to 30 percent, depending on the product.

Peru's overvalued exchange rate, the result of high interest rates designed to dampen inflation, has encouraged imports and discouraged exports. ■

Philippines

Profile of agriculture

Agriculture plays a major role in the Philippine economy, accounting for 25 percent of gross national product and employing 40 percent of the country's

work force. When fisheries and forestry are included, real 1991 agricultural growth of 3.5 percent led all other sectors.

Most agricultural area is located on 10 of the country's 7,100 islands, led by the large islands of Luzon in the north and Mindanao in the south. The latest agricultural census (1980) estimated 3.4 million farmholdings, of which approximately 96 percent were less than 10 hectares.

The agricultural environment varies from north to south. Irrigation is needed in the northern islands, especially for rice, to supplement the July-November monsoon rains; Mindanao, in the south, has a more consistent rainfall pattern suitable for nonirrigated crop production. That area leads in the production of corn and traditional export crops such as coconuts, pineapples, and cavendish bananas.

Crops account for about 70 percent of the total value of agricultural production, with livestock and poultry comprising the balance. Most agricultural output is consumed domestically. The Philippines was self-sufficient in rice, corn, poultry, and pork in 1991. Rice, corn, and coconuts are the largest crops.

Overall, agricultural output is hindered by several factors, including low level of technology, inadequate and costly inputs, scarce and high-cost production financing, and underdeveloped infrastructure for transportation and storage.

Production trends

The outlook for traditional Philippine agriculture is uncertain. Debate is increasing regarding the merits of food self-sufficiency versus imports. There is a general trend toward more export-oriented production of high-value products.

Medium-grain rice is the country's most important crop and food staple. However, production is beginning to lag behind population growth. Potential is



Philippines at a Glance

Population (1991): 62.1 million

Urban population: 42%

Population growth rate: 2.1%

Per capita income (1991 est.): \$739

Land use: Crops 37%, meadows and pastures 4%, forest and woodland 40%, other 19%

Major crops: Rice, corn, bananas, coconut, sugarcane, pineapple, coffee, tobacco, mangoes

Livestock sector: Poultry, swine, aquaculture

Leading agricultural exports: Coconut oil, bananas, fresh and processed pineapple, sugar, forest products

Leading agricultural imports: Dairy products, wheat, soybean meal, cotton, tobacco, forest products

Agricultural imports as a share of total imports: 9-11%

U.S. share of total agricultural imports: 27-32%

Percent of labor force in agriculture: 40-43%

Membership in economic or trade organizations: ADB, ASEAN, FAO, GATT, IBRD, ICO, IMF, UNCTAD, WFC

Agricultural Production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Crop production		
Bananas	2,913	3,000
Cassavas	1,854	1,860
Citrus	152	155
Coffee, green ²	58	66
Copra ²	2,202	2,000
Corn ²	5,102	4,850
Mangoes	338	350
Pineapples	1,156	1,160
Rice, raw ²	9,883	9,300
Sugar ²	1,718	1,900
Tobacco	66	71

	<i>mil. head</i>	
Livestock numbers		
Cattle and buffalo	4.4	4.4
Hogs	8.1	8.0
Goat	2.1	2.2
Chicken, total	69.5	65.5
Broilers	13.6	12.1
Layers	17.9	16.4
Others (spent layers, roosters, young chickens)	38.1	37.0
Ducks	7.2	8.3

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	132	129
Chevon (goat meat)	57	58
Eggs		
Chicken ³	166	165
Duck ³	30	32
Pork	665	690
Poultry meat	279	300

¹ Preliminary estimate.

² Calendar years except July-June for coffee, corn and rice; Sept.-Aug. for sugar; and Oct.-Sept. for copra.

³ Million eggs.

limited for cost-effective expansion of either rice area or yields. Weather-related crop losses often force the Philippines to import rice. A bumper 1991 rice crop eliminated the need for imports for the first time in 5 years.

The second most valuable crop is corn (both yellow and white varieties) for feed and food use. Historically, yellow feed corn has also been imported

Value of Agricultural Imports, 1991¹

	Total imports	U.S. share
	\$ mil. ²	%
Selected products		
Beverages	20.5	4
Dairy products	205.1	2
Essential oils	41.2	29
Forest products	31.3	31
Fruits and vegetables	29.4	38
Milling wheat	168.8	93
Raw cotton	74.5	72
Rubber	21.7	13
Soybean meal	116.1	31
Tobacco	81.7	28
All agricultural products³	1,046.6	32

¹ Preliminary estimate based on actual Jan.-Oct. 1991 import data.

² Values are shown in U.S. dollars at U.S.\$1=27.50 pesos.

³ Includes products not listed. Excludes fishery products.

to supply the rapidly expanding poultry and hog industries. Recently, however, domestic production of both varieties has increased sharply in response to higher Government price supports and procurement levels. In 1991, this excess resulted in surplus stocks which enabled exports for the first time. There is further potential for higher output by expanding the use of hybrid seed.

The outlook for traditional export-oriented crops including coconuts, sugar, and coffee is uncertain given changing world demand and competition. Output of coconuts is declining, coffee production is stagnant, and sugar exports are largely dependent on the U.S. import quota.

On the other hand, tobacco production is increasing in response to greater world demand for improved Philippine quality. Production and exports of bananas, pineapples, and nontraditional

high-value products such as prawns, asparagus, and cut flowers are also generally expanding.

Farm and food policy

For most of agriculture, the Government's policy is market-oriented, except for the crops considered strategically important, especially rice, corn, and sugar. An intervention policy for these crops is largely based on Government concerns for employment and meeting basic food needs.

Various Government agencies control production and trade of rice, corn, and sugar through price supports, consumer subsidies, and import controls.

The Government redistributes farmland through a land reform program.

The Government is encouraging diversification into new export-oriented high-value crops, liberalizing trade, and experimenting with ending its role in the domestic grain market.

In food marketing, the private sector operates freely at both the wholesale and retail levels.

Retail price controls on basic food-stuffs were abandoned or ignored in 1991 except for subsidized rice and corn.

Trade trends

Historically, the Philippines is a net exporter of agricultural and forest products. In 1991, the value of agricultural imports was estimated at \$1.05 billion versus agricultural exports worth \$1.33 billion.

Agricultural exports account for about 3 percent of GNP and 13 percent of total exports. In value terms, the most important export crops are coconuts (oil and copra/meal), bananas, pineapples, sugar, prawns, tobacco, and forest products.

The trend is toward increased exports of high-value products such as fruits, vegetables, prawns, and cut flowers. Processed poultry products also have some export potential. Forest product

exports are expected to decrease in response to increasing environmental concerns. The principal markets for Philippine agricultural exports are Japan, the United States, and the European Community (EC).

The Philippines' major agricultural imports of dairy products, wheat, and soybean meal are expected to continue to rise in response to population growth and changing consumption patterns.

Raw cotton, unmanufactured tobacco, and fresh fruit are also leading imports. Imports of wood and wood products are expected to increase as a result of limitations on domestic logging. Principal suppliers are the United States, Australia, Canada, and the EC. Thailand, China, and recently Vietnam are the principal rice and corn suppliers when the domestic crops are inadequate.

Trade policy and prospects

Philippine import policies have been liberalized significantly since 1986 when quantitative import restrictions were lifted. However, imports of rice, corn, sugar, and some high-value products of U.S. interest continue to be restricted by nontariff barriers for both national security and political reasons.

In 1991 import duties were generally reduced. However, duties on many high-value agricultural products of U.S. interest either were not reduced or were raised. Moreover, the tariff reform was undermined by a new comprehensive 9-percent import surcharge for 1991/92, which was later lowered to 5 percent.

The Government's export policies are generally market-oriented. All agricultural export activities are conducted by the private sector, in contrast to the pre-1986 period. Exports are not directly taxed, although inspection fees apply in some cases. The Philippines has no direct promotion programs for its exports. A notable exception occurred in 1991 when the Government exported its surplus corn stocks. ■

Poland

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Fruit, total	1,416	1,875
Apples	812	1,146
Berries	437	510
Grains, total	28,014	27,811
Barley	4,217	4,257
Rye	6,044	5,899
Triticale	2,721	2,449
Wheat	9,026	9,270
Hay	29,113	¹
Potatoes	36,313	29,038
Rapeseed	1,206	1,045
Sugar beets	16,721	11,879

	<i>mil. head</i>	
Livestock numbers ²		
Cattle	9.0	8.0
Dairy	4.7	4.4
Other	4.3	3.6
Hogs	19.7	20.7
Sows	2.0	2.0
Other	17.7	18.7
Horses ³	0.9	0.9
Poultry ³	65.0	55.0
Broilers	¹	¹
Layers	43.9	35.3
Sheep	3.8	2.9

	<i>thous. metric tons</i>	
Animal product output		
Dairy		
Butter	315	2503
Cheese	126	125
Milk ⁴	15.4	14.53
Meat ⁵	2,518	2,610
Beef/veal	692	600
Pork	1,498	1,670
Poultry	328	340
Eggs ⁶	7.6	7.8

¹ Not available.

² As of Dec. 31 each year.

³ As of June 30 each year.

⁴ Billion liters.

⁵ Carcass weight equivalents.

⁶ Billion eggs.

Profile of agriculture

Agriculture is one of the most important sectors of the Polish economy. It provides employment for 26 percent of the work force and accounts for 13 percent of national income.

About 75 percent of agricultural production derives from the country's 2.1 million private (peasant) farms, averaging only 5.5 hectares in size. Most farms are highly diversified, typically consisting of one to three dairy cows, several pigs, a small flock of chickens, a few fruit trees, and small fields of grain and potatoes. Half of the power is provided by horses. Large, highly-mechanized state farms, located mainly in western and northern Poland, account for 25 percent of agricultural production and a greater share of marketing.

Livestock accounts for two-thirds of farmers' cash receipts, of which 50 percent is derived from slaughter animals and more than 30 percent from milk. Aside from dairy farming, hogs are easily the most popular livestock enterprise, as pork represents 60 percent of meat demand. Production of beef is only one-third that of pork and consists of male or culled dairy stock. There are virtually no specialized beef herds. Broilers are the only meat produced intensively, yet account for only 13 percent of consumption. The performance of all classes of livestock is retarded by inferior rations, especially shortages of high-protein feed ingredients.

Production trends

Under the economic transformation program launched in 1989, Poland has become self-sufficient in most basic commodities, notably meat, bread grains, and dairy products, as the market pricing mechanism has considerably curtailed waste. However, supplies of oil meals, high-quality wheats/feed grains, and commodities such as cotton and rice which Poland is unable to grow, continue to be inadequate.

Agricultural productivity is falling as



Poland at a Glance

Population (1991): 38.3 million

Urban population: 62%

Population growth rate: 0.3%

Per capita income (1990): \$1,675

Land use: Crops 47%, meadows and pastures 13%, forest and woodland 28%, other 12%

Major crops: Potatoes, wheat, rye, barley, hay, rapeseed, sugar beets, fruits, vegetables

Livestock sector: Hogs, cattle (dual-purpose), poultry, horses

Leading agricultural exports: Meats, slaughter cattle, rapeseed, sugar, processed fruit, grains, potatoes

Leading agricultural imports: Protein meals, cotton, hides, vegetable oil, citrus, wine, coffee, tobacco

Agricultural imports as a share of total imports: 9%

U.S. share of total agricultural imports: 3%

Percent of labor force in agriculture: 26%

Membership in economic or trade organizations: CCC, CE, FAO, GATT, ISO

the Government no longer subsidizes off-farm inputs, and the prices farmers receive do not cover these costs. Moreover, many state farms are burdened with debt and high interest rates.

Adjustment has been most wrenching in the dairy sector. Animal numbers have declined 21 percent since January 1990; some of the best herds have been liquidated, and yield per cow is off 3 percent.

Crop yields have suffered as fertilizer

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products²		
Cattle hides	15	1
Citrus	13	0
Coffee	31	0
Cotton	73	15
Meat	21	0
Oilseed meals	72	0
Rice	8	35
Tobacco	32	18
Vegetable oil	34	0
Wheat	11	57
Wine	33	1
Other	523	0
All agricultural products	866	3

¹ Values are shown in U.S. dollars at U.S.\$1=9,5000 zlotys. Data do not include donations.

² Specified products are state imports only. Private imports are included in "other" category, along with remaining state imports.

and farm chemical use has fallen more than 50 percent. For example, wheat yields were down 5 percent in 1991, despite favorable weather, while sugar beet yields dropped 13 percent.

Farm and food policy

Since 1990, the Government has been moving towards a free market policy for agriculture. Prices of all foods are now unregulated, and the only remaining producer subsidies are limited preferential credits for the purchase of agricultural chemicals and other inputs. While this policy has raised prices to consumers and lowered returns to farmers, it has slowed a heavy drain on the treasury.

Consistent with its marketization policy, the Government has sought to privatize state-controlled companies which traditionally dominated the farm input, food processing, and distribution sectors. Some success has been achieved. Owing partly to the startup of

new firms, processing of meat by the state sector has dropped from more than 80 percent of the total in 1988 to less than 50 percent in 1991.

Meanwhile, the proportion of retail food outlets owned by the state has declined from about 50 percent to 25 percent. Privatization of grain marketing and the input industries has proceeded much more slowly.

Through price and trade reform, Polish consumers have gained access to a much greater variety of foodstuffs, especially tropical fruits, European Community (EC) dairy products, and Western grocery items. However, as incomes still are quite low, most families must use at least one-half of their earnings for food purchases.

Trade trends

Since 1989 when marketization of the economy began, Poland has changed from a marginal importer to net exporter of agricultural commodities; 1990 sales were \$2.2 billion versus imports of \$866 million (excluding \$257 million worth of food aid). This gain has occurred mainly through lower purchases of wheat, feed grains, and soy meal, and larger shipments of slaughter cattle, rapeseed, and sugar.

The United States accounts for only about 3 percent of Poland's agricultural imports, down from 8 percent before introduction of the new economic policies. Purchases of grain and feed, which dominated U.S.-Polish farm trade under the Communists, have declined by more than 90 percent, while imports of oil meal are only one-third of previous levels. Although some recovery is under way in meal demand, grain imports are likely to remain weak as domestic supplies exceed needs.

Poland's agricultural exports also are in transition. Livestock and meat products led a 15-percent gain in export value, accounting for more than one-fourth of 1990 receipts. However, this was due mainly to liquidation in the

dairy sector which sent 750,000 cattle over the border before EC officials could impose a quota. Export earnings were further enhanced by the collapse of the internal marketing channels for rapeseed, making it easier and more profitable to supply foreign buyers than local crushers, despite domestic shortages of vegetable oil and feed meal.

Trade policy and prospects

Poland supports liberalization of agricultural trade. Throughout 1990 and early 1991, there were no significant tariffs or other restrictions on agricultural imports as authorities strove to enhance consumer welfare, while pressuring farms and food processors to become more competitive. Subsidized EC exports, depressed farm prices, and the need for additional revenues caused the Government to abandon this policy on Aug. 1, 1991, and to set tariffs of 20-30 percent for most agricultural products.

In December 1991, Poland signed an association agreement with the EC, directed toward eventual full membership. Terms are more favorable for industry than for agriculture, which will continue to face quotas, variable levies, minimal price requirements, and other restrictive EC import mechanisms, though some easing will occur over the 5 years of the agreement. In turn, Poland agreed to reduce by 10 percent the tariffs on EC agricultural items not produced locally.

To enhance exports to the east, which plunged 70 percent with the abandonment of the transferable ruble, Poland has sought to develop barter trade. In 1991, two official barter agreements were signed which resulted in export or commitment of 450,000 tons of grain and 450,000 tons of potatoes and other agricultural products (valued at \$300 million) in exchange for Soviet/Russian natural gas, cotton, and mineral fertilizers. Small-scale, private barter transactions also are occurring. ■

Portugal

Profile of agriculture

Located on the Atlantic coast of the Iberian Peninsula, Portugal has a cool, maritime climate in the north and a warmer, Mediterranean climate in the south.

Since Portugal joined the European

Community (EC) in 1986, agriculture has been growing more slowly than the general economy.

Modernization of the agricultural sector is hampered by the large number of inefficient small farms. Farm size averages 7 hectares—less than half the EC average—often scattered among several parcels. Only 30 percent of these units are considered economically viable. Particularly critical, the country has a very small agricultural land base. Other problems include a preponderance of poor soils, lack of modern infrastructure, and an aging, poorly educated rural labor force.

These factors, combined with the growing application of stricter EC production rules, are increasing Portugal's dependency on food imports.

Portugal's plentiful forests make it a net exporter of forest products, and the world's leading producer of cork. Fishing is also an important industry.

Agricultural Production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Crop production		
Apples	143	143
Corn	643	621
Olives ²	294	320
Oranges	135	3
Potatoes	999	939
Tomatoes for processing	712	730
Wheat	268	322
Wine grapes ²	10,431	10,118

	<i>thous. head</i>	
Livestock numbers		
Cattle	1,375	1,380
Beef	233	228
Dairy	403	405
Hogs	2,664	2,834
Poultry		
Broilers ⁴	124	133
Layers ⁴	7	9
Sheep	3,347	3,413

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	114	100
Butter	15	17
Cheese	49	49
Eggs ⁵	115	122
Milk		
Cow	1,519	1,550
Goat	10	11
Pork	239	244
Poultry meat	210	222

¹ Estimated.

² Thousand hectoliters.

³ Not available.

⁴ Millions.

⁵ Million dozen.



Portugal at a Glance

Population (1991): 9.8 million

Urban population: 54%

Population growth rate: 0.3%

Per capita income (1990): \$6,099

Land use: Crops 38%, meadows and pastures 6%, forest and woodland 40%, other 16%

Major crops: Wine grapes, potatoes, tomatoes, grains, olives

Livestock sector: Sheep, hogs, beef and dairy cattle, poultry—broilers and layers

Leading agricultural exports: Cork, wine, tomato paste, rosin, soybean meal

Leading agricultural imports: Hides and skins, raw cotton, wood, soybeans, wood, beef, wool, sunflowerseed, corn, sugar, corn gluten feed, manioc

Agricultural imports as a share of total imports: 14.5%

U.S. share of total agricultural imports: 12.3%

Percent of labor force in agriculture: 18%

Membership in economic or trade organizations: EC, GATT, OECD

Production trends

Agricultural production grew at an average of 1.2 percent in real terms from 1986 to 1990. However, total agricultural production declined in 1991 as a result of poor weather conditions and lower priced imports from other EC countries.

Portugal's completion of its EC Accession commitments by 1995 will result in further production declines in the medium term.

Horticultural products account for roughly 14 percent of agricultural production; these products are considered competitive. Processed tomatoes are one of the chief Portuguese agricultural exports. Despite poor marketing structures and the absence of an efficient processing industry, production of other horticultural products has also increased.

The hog sector accounts for roughly 13 percent of agricultural production. Benefiting from advantageous natural conditions and modern production units, total output is expected to continue to increase to meet expanding domestic

demand (growing at an estimated 4 to 6 percent yearly rate). Export prospects of pork and pork products will brighten once African swine fever is eradicated.

Fresh milk production accounts for roughly 12 percent of agricultural production. Producers benefit from a generous 1,900,000-metric-ton fresh milk EC production quota, which is almost 20 percent above actual production levels. Prospects are bright because of the absence of significant EC competition in

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products²		
Barley	24.3	12.7
Beef	174.9	0.0
Coffee	54.0	0.0
Corn	123.8	93.5
Corn gluten feed	94.8	100.0
Cotton	339.0	6.9
Hides and skins	464.9	2.4
Manioc	86.2	0.0
Pork	55.3	0.0
Soybeans	210.1	42.9
Sugar	105.9	0.0
Sunflowerseed	152.7	0.0
Wood	204.9	2.9
Wool	167.8	0.0
All agricultural products²	3,582.5	12.3

¹ Values are shown in U.S. dollars at U.S. \$1=143.5 escudos.

² Includes products not listed. Includes wood products.

this market sector and because producers expect productivity gains through modernization.

Wine, one of Portugal's traditional products, represents approximately 10 percent of agricultural production. Wine production dropped in 1991, because of lower prices. Production is forecast to remain stable in the medium term due to the presence of well-established and competitive firms.

Beef and grains, other traditional products, currently account for 9 and 7 percent of the total, respectively, and are not expected to fare as well as wine. Their production may be reduced by as much as 50 percent before the end of EC Accession in 1995, partly because of stricter production rules. Portugal, with limited land, is not self-sufficient in grain production.

Average wheat yields have traditionally been among the lowest in Europe and production costs are high.

Portugal's production of oilseeds is very small, and most of its needs are covered by imports.

Farm and food policy

Since Portugal joined the EC in 1986, its farm and food policies have gradually been aligned to conform to CAP regulations. Portugal has had to open its border to lower priced products from other EC countries. This new trade policy increased competition and forced down domestic producer prices. The transition process for many, but not all, products should be completed by 1996.

Due to its low level of agricultural development, Portugal was able to negotiate a 10-year two-stage transition period for many products, allowing gradual adjustment to stricter EC production norms and more liberal market regulations. Recognizing Portugal's inability to catch up with other EC countries, the EC recently agreed to prolong some of the transition measures. The most important are a 5-year extension of transition in the grain sector and a special subsidy to soft wheat producers, as well as special trade barriers for a number of sensitive commodities.

Food prices were gradually liberalized during the first stage of EC Accession, and state monopolies were dismantled. Imports are carried out by private companies, including branches of leading multinationals. The distribution system has also changed radically, with a boom in supermarkets and hypermarkets. This new retail system has led to increased demand for standardized food imports.

Trade trends

Portugal is a net agricultural importer, buying over half its food needs from other countries. Agricultural imports totaled \$3.6 billion in 1990,

compared to \$2.1 billion in exports. Its overall dependency on food imports is likely to continue to increase as cheaper products from other EC countries continue to make inroads in the local market.

Dominant imports include grains, nongrain feed ingredients, and miscellaneous feed products, which accounted for 17 percent of total imports in 1990. Grain imports will tend to increase substantially during the remainder of Portugal's EC transition period, given the anticipated decline in domestic output. On the other hand, imports of nongrain feed ingredients, including corn gluten feed from the United States, could be replaced, to some extent, by cheaper EC feed grains.

Oilseed imports have risen gradually since Portugal joined the EC. With privatization, imports could enter freely to meet growing demand. Of particular interest to the United States, total soybean import levels increased significantly during the first stage of EC transition. The Portuguese oils market is highly competitive, and the success of soybean imports is dependent on maintaining soybean oil's price advantage over competing oils.

Traditional Portuguese imports of hides and skins and cotton are dependent on the performance of the national shoe manufacturing and textile industries. Both industries are restructuring in the face of strong foreign competition and production is likely to decline. Textiles are Portugal's largest exports.

Trade policy and prospects

Portugal's trade policy applies the EC system of import levies and duties. As a result, the Portuguese market is increasingly supplied by other EC countries. Portugal has been able to maintain certain quantitative and tariff barriers to intra-EC trade. However, these barriers will have to be lifted by the end of the transition process. ■

Romania

R

Profile of agriculture

About 30 percent of Romania's land area is occupied by the Carpathian Mountains. To the south lie fertile, well-watered plains. While the northern and eastern plains are subject to periodic drought, generally Romania has a cool, continental climate.

The Romanian agricultural sector is one of the largest among East European countries because of favorable soil and

climatic conditions for most crops.

About 30 percent of the country's gross national product comes from agriculture, mainly from grain, oilseed, sugar beet, horticulture, and livestock production. Formerly a net agricultural exporter, Romania now imports a significant amount of food and agricultural products to offset dwindling domestic production and to meet the growing demands of the population.

About 30 percent of the total labor force is employed in agriculture. Most farm laborers are older and unskilled since younger workers have migrated to the cities in search of better paying jobs and living conditions.

Agricultural Production

	1990/91	1991/92
	<i>thous. metric tons</i>	
Crop production		
Barley	2,680	2,951
Corn	6,810	10,498
Grapes	954	849
Potatoes	2,852	1,635
Soybeans	141	179
Sunflowers	556	612
Vegetables	2,225	2,112
Wheat	7,300	5,517

	1990	1991
	<i>thous. head</i>	
Livestock numbers¹		
Cattle	5,437	5,025
Cows/heifers	2,031	1,800
Private	2,426	2,900
Poultry	81,878	78,000
Sheep	13,896	13,465
Private	8,512	9,300
Swine	12,066	11,940
Sows/gilts	967	950
Private	3,400	²

	<i>thous. metric tons</i>	
Animal product output		
Butter	32.8	24
Cheese	91.3	70
Eggs ³	5,000	4,400
Meat	1,600	1,750
Milk ⁴	2,800	2,600

¹ Semiofficial animal inventories as of Jan. 1, 1991 and Nov. 1, 1991.

² Not available.

³ Million eggs.

⁴ Million hectoliters.

Production trends

The growing demand for livestock products has driven up free market prices for such products to extremely high levels. Because of the high profitability enjoyed by the livestock sector, private producers are expanding their animal numbers, and allocating larger areas of land for the production of feed grains and forage crops necessary to sustain these animals. Within the livestock sector, hog and poultry production have the best prospects for future development because of shorter production cycles and higher revenues.

Corn will continue to be the leading crop in the near future, accounting for about 30 percent of the arable area. Romania's tradition and experience in cultivating this crop, favorable soil and climatic conditions, and the continued importance of the product for animal feed will encourage farmers to reserve large areas for corn cultivation. In order to meet the demands of the growing urban population for fresh fruits and vegetables, farmers are planting more horticultural crops.

Production of industrial crops (oilseeds, sugar beets, flax and hemp, and tobacco) dropped sharply both in 1990 and 1991, mostly as a result of lower prices and resulting declines in



Romania at a Glance

Population (1991): 23.3 million

Urban population: 58%

Population growth rate: 0.5%

Per capita income (1991): \$1,200

Land use: Crops 46%, meadows and pastures 19%, forest and woodland 28%, other 7%

Major crops: Corn, wheat, barley, vegetables, fruits, sunflowers, sugar beets, forage crops

Livestock sector: Poultry, sheep, swine, cattle

Leading agricultural exports: Wine, live sheep, live cattle, vegetables, fruits, pork, beef

Leading agricultural imports: Meat, soybeans, corn, soybean meal, sugar, hides and skins, fish meal, potatoes, cotton, vegetable oils, wheat, barley

Agricultural imports as a share of total imports: 20%

U.S. share of total agricultural imports: 7-9%

Percent of labor force in agriculture: 30%

Membership in economic or trade organizations: CCC, FAO, GATT, IBRD, IMF, UNCTAD, WFC

planted area.

One important factor in increasing food and fiber output is availability of inputs for the agricultural sector. Because of skyrocketing inflation, such inputs as fertilizers and pesticides were priced out of reach of most producers in 1991. This situation, which negatively affected crop yields, will continue to affect yields in 1992.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products²		
Barley	16	0
Corn	95	89
Cotton	30	53
Fish meal	27	0
Hides and skins	35	37
Meat	220	9
Potatoes	26	0
Soybean meal	84	0
Soybeans	112	71
Sugar	48	0
Vegetable oils	20	0
Wheat	17	0
All agricultural products²	800	8

¹ Values are shown in U.S. dollars at U.S.\$1=29.0 lei.

² Includes products not listed.

Farm and food policy

Since the 1960's, Romania's agriculture was organized into large but mostly inefficient state and cooperative farms. These centrally controlled farms, were deprived of necessary inputs. Producers were required to deliver to the state purchasing agency large amounts of their output at low, fixed prices that did not reflect real market value.

The former regime promoted production of almost every type of crop that could be grown in Romania in each region of the country, regardless of economic efficiency.

The current Government now states that a priority of its economic reform is the abolition of the large cooperative and collective farms and the return of most of the land to private farming. The Government hopes that freeing the Romanian agro-industrial sector will stimulate production to meet the growing needs of the population and to

increase exports.

In early 1991, legislation regulating the return of the land to private ownership was passed. Implementation is going slowly, and only a handful of the 6.2 million claimants have been given property rights and received land.

The success of the privatization process in agriculture will depend, to a large extent, on the development of the necessary infrastructure to serve potential producers. Many years of deprivation have left producers in a subsistence situation. To stimulate production, the Government is considering legislative measures including land and income tax breaks, availability of agricultural credit, and expansion of the land lease provisions of the land reform.

Although current legislation allows private companies to operate in the food marketing and distribution sectors, lack of proper storage and packaging limits future development. Currently, most agricultural and food products are sold in open-air markets and in small stores that lack proper sanitation facilities.

Although agriculture received much media coverage in 1990/91, farmers feel that without significant financial assistance for producers, such as subsidies, the country will not again become a net agricultural exporter.

Trade trends

Traditionally, Romania was a net agricultural exporter. Agricultural exports were one of the main sources of hard currency to finance imports of raw materials and equipment needed by other sectors of the economy. Following the December 1989 revolution, Romania used the foreign exchange reserves accumulated by the former regime to import more agricultural and food products and other agriculture-related goods. At the same time, the Government banned almost all agricultural exports, in an effort to provide better food supplies to the population. Total agricultural imports for 1990

amounted to about \$800 million while exports were only \$75 million.

U.S. agricultural exports to Romania surged to \$217 million in 1990, compared to only \$60 million in 1989. The leading U.S. agricultural exports were corn, soybeans, cotton, meat, and hides and skins.

Romanian officials estimated that in 1991 both the import volume and value dropped significantly as a result of foreign exchange shortages. At the same time, the Government maintained its ban on food and agricultural exports, allowing only some low quantitative quotas for live sheep and cattle, pork, fruits, vegetables, and wines.

Trade policy and prospects

Because of structural changes under way in the agricultural sector, total output may not pick up for the next several years. Therefore, the tight ban on exports probably will be maintained and imports will be used to alleviate domestic food shortfalls.

The Government has stated repeatedly that it will pursue a liberalized trade policy without any state export subsidies and reasonable import duties, in line with GATT regulations. Romania has just introduced the Harmonized Tariff Schedule; the highest import duties are 30 percent.

As part of the market economy reform, private companies were allowed to operate in the foreign trade sector. Preliminary data indicate that about 20 percent of Romania's foreign trade was handled by private companies in 1991.

Best prospects for U.S. exports are soybeans and soybean meal, cotton, and hides and skins. The most important nontariff barrier to imports is the lack of convertibility of local currency. U.S. trade prospects with Romania will increase, if Romania receives most-favored-nation status. ■

Saudi Arabia

Profile of agriculture

The Kingdom of Saudi Arabia is almost entirely desert, with an arid climate subject to great extremes of temperature.

Historically, the Saudi economy was based on subsistence agriculture, mainly

dates and animal production. During the past 20-30 years, the wealth generated from oil has been widely used for rapid modernization and ambitious industrial development. Starting in the early 1970's, Saudi Arabia also made major, though costly, strides in large-scale agricultural production using modern technology.

Rainfed agriculture is not feasible, except in the southwest, where dams have been built to control water storage and use. Over 80 percent of water requirements are met by pumping from wells and deep aquifers.

Production trends

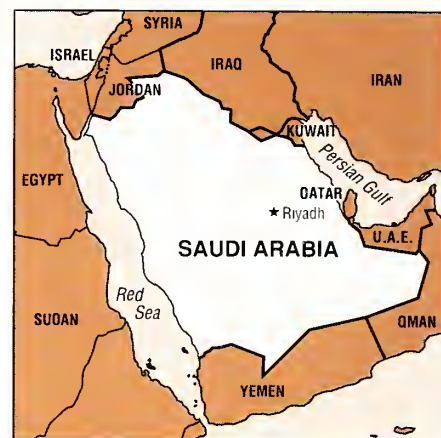
Area planted to crops, vegetables, and trees was about 1.1 million hectares by 1989, and is expected to grow further. Wheat is the biggest crop, reaching a record high of nearly 4 million tons in 1991/92. The country achieved self-sufficiency in wheat in 1984/85, and since 1986 has become a net exporter.

Among feed grains, the Government has been encouraging expansion of barley production.

Saudi Arabia is the world's largest producer of dates (projected at 505,000 tons for 1991). The country also produces a wide range of vegetables and fruits using modern technologies such as drip irrigation systems and climate-controlled greenhouses. The major products are melons, tomatoes, cucumbers, eggplants, squash, carrots, potatoes, onions, and okra.

Dairy farming, which dominates the livestock sector, is one of the most developed agricultural enterprises in the country. Saudi Arabia is self-sufficient in fresh milk. Sheep raising is growing rapidly with the creation of large new fattening units. Local production meets slightly more than 50 percent of demand. Camels and goats are raised by the Bedouins for meat and milk and are a strong part of that group's cultural heritage and tradition.

Dairy production is projected to level



Saudi Arabia at a Glance

Population (1991): 11.7 million

Urban population: 60%

Population growth rate: 3.7%

Per capita income (1991 est.): \$7,076

Land use: Crops 1%, meadows and pastures 39%, forest and woodland 1%, other 59%

Major crops: Wheat, barley, date palms, fodder, vegetables

Livestock sector: Poultry—broilers and layers, dairy and beef cattle, sheep, goats, camels

Leading agricultural exports: Wheat, eggs, dates

Leading agricultural imports: Milk and dairy products, breeding livestock, tobacco products, poultry meat, wood, lumber, cork, vegetables, cereals and products, rice, fruit and fruit products, coffee, tea and related products, barley

Agricultural imports as a share of total imports: 16%

U.S. share of total agricultural imports: 13%

Percent of labor force in agriculture: 15%

Membership in economic or trade organizations: ABEDA, AFDB, AMF, CCC, FAO, GCC, IBRD, IDA, IDB, IFAD, IWC, OPEC, UNCTAD

off as the Kingdom surpasses self-sufficiency in fresh milk. Domestic production of red meat, mainly mutton, is expected to increase further by about 2 to 4 percent as new production projects become operational. Camel and goat numbers are forecast to drop further as more Bedouins take on new agricultural

Agricultural Production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Crop production		
Date palm	502	505
Fruits	300	305
Grains		
Barley	350	375
Millet	12	12
Sorghum	81	85
Wheat	3,600	4,000
Vegetables and melons	2,000	2,000

Crop production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Date palm	502	505
Fruits	300	305
Grains		
Barley	350	375
Millet	12	12
Sorghum	81	85
Wheat	3,600	4,000
Vegetables and melons	2,000	2,000

Livestock numbers

	<i>thous. head</i>	
Camels	389	²
Cattle		
Beef	96	76
Dairy	95	100
Goats	3,353	²
Poultry ³		
Broilers	263	263
Layers	8	8
Sheep	6,457	5,692

Animal product output

	<i>thous. metric tons</i>	
Beef and veal	14	10
Eggs ⁴	2,900	2,985
Lamb, goat, and mutton	96	97
Milk		
Camel	3	²
Cow	220	²
Goat	5	²
Poultry meat	263	273

¹ Estimates except wheat.

² Not available.

³ Millions.

⁴ Million dozen.

Value of Agricultural Imports, 1990

	Total imports \$mil. ¹	U.S. share %
Selected products		
Barley	89	19
Cereals and products	169	10
Coffee, tea, and related products	123	4
Dairy products	462	2
Animals, live	403	1
Fruits, non-citrus	139	11
Misc. food preparations	136	16
Poultry meat	264	3
Prepared, preserved fruit	94	26
Rice	152	12
Tobacco products	277	50
Vegetable oils	96	31
Vegetables	173	4
Wood, lumber and cord	218	4
All agricultural products ²	3,630	13

¹ Values are shown in U.S. dollars at U.S.\$1=3.745
riyals

² Includes products not listed.

projects and move away from their traditional farming practices.

The poultry industry is highly modernized. Exports of fresh table eggs to the neighboring Gulf states have been rising steadily over the past few years. Domestic broiler production is approaching 50 percent of self-sufficiency. Production of poultry meat will continue to increase further because of favorable prices, Government support, and the overall consumer preference and demand for fresh poultry.

Agriculture is now a major and growing source of income for about 15 percent of the labor force, and its share of gross domestic product (GDP) in 1991 is projected to exceed 9 percent.

Production trends

Prospects for agricultural output in 1992 are good. Wheat and barley

production is forecast to rise slightly from the 1991 levels. Prospects for horticultural and forage crops in 1991/92 look equally good because of the ongoing Government policy of issuing licenses for new production units.

Farm and food policy

Food security has been a long-standing and major goal of the Saudi Government since the mid-1970's. In addition to easy credit and other production incentives, the Government provides many direct and indirect subsidies including generous crop supports, subsidies on farm machinery and chemicals, easy or interest-free loans, and high import tariffs to protect domestic producers.

Agricultural production is handled by the private sector; the Government's role is limited to policymaking, defining objectives, and supporting private enterprise. Despite the marked domestic increases, agricultural production has not kept pace with overall food demand. Food imports fill the gap, but Government policy aims to reduce the dependence on imported agricultural products, especially food.

The country is diversifying and expanding its food industry, as well as establishing marketing companies and centers to market agricultural products inside and outside the Kingdom. Animal production, fodder crops, vegetables, and fruits are generating new interest.

Trade trends

During 1986-90, Saudi agricultural imports leveled off at around \$3.8 billion and constituted about 18 percent of the total value of the Kingdom's imports. The United States accounts for between 10 and 13 percent of the value of Saudi agricultural imports.

Saudi agricultural exports include wheat, table eggs, fresh milk, dairy products, fish, livestock, animal and poultry feed, fresh vegetables, fruits,

ornamental plants, and date palm seedlings. Wheat exports in the 1991/92 season are projected at 2.4 million tons. With the use of subsidies to offset very high production costs, Saudi Arabia has become the world's sixth largest wheat-exporting country.

Most Saudi agricultural exports go to the neighboring countries of the Gulf Cooperation Council (GCC) and the Arab League countries.

Major agricultural imports include dairy products, live animals, cereals and products, poultry meat, fruits and vegetables, and tobacco products.

Trade policy and prospects

Except for wheat and barley, which are handled by the Government, trade in other agricultural products is handled by the private sector.

Most food products are not subject to the normal 12-percent ad valorem import duty, but a 20-percent valorem duty may be imposed on imports of table eggs, poultry meat, and cooking oil to protect local "infant industry" producers, and domestic crops that fill 40 percent or more of domestic demand.

Restrictive, strictly enforced quality, labeling, and shelf-life standards are imposed on imported food products. Imports of pork and pork products, alcoholic beverages, and products containing alcohol are prohibited.

Future agricultural trade prospects in Saudi Arabia are good. Imports of feed ingredients such as corn and soybean meal are likely to increase to meet growing demand from the expanding livestock and poultry industries.

Responding to Government emphasis on diversification of agricultural production, barley output is expected to increase in the next 2-3 years, thereby reducing imports. On the other hand, rice imports are expected to increase. Imports of livestock, meat, vegetable oils, and dairy products could rise somewhat. ■

Senegal

Profile of agriculture

Senegal, located on the west coast of Africa, has a tropical climate, with wet and dry seasons. During the dry season, a dusty wind (the Harmattan) blows in from the northeast.

Twenty-seven percent of the land is arable, and 31 percent forested. About two-thirds of the population is rural.

Most of Senegal falls within the Sahel zone, with irregular and inadequate rainfall, and generally poor soils. With only limited amounts of irrigated land, the heavy dependence on dryland cultivation results in wide swings in production. In years of favorable rainfall, the country produces close to 1 million tons of the basic staples—millet and sorghum. In dry years, production reaches only one-third to half of that level. These two commodities supply about two-thirds of the calories in rural diets. Residents of Dakar and other major cities rely heavily on imported rice and wheat as dietary staples. Senegal must import over 500,000 tons of rice

and wheat annually to satisfy urban demand.

Agriculture, including fishing, plays a dominant role in Senegal's economy. It employs approximately 70 percent of the labor force, a much larger portion than its one-fifth share of gross national product would indicate.

Almost two-fifths of Senegal's cultivated land is planted to peanuts, its largest crop. Over the longer term, Senegal faces a growing problem with soil degradation in the peanut basin, the major agricultural region east of Dakar. The organic material in the soil is being depleted, and soil fertility is declining because farmers use practically all crop vegetation produced each year for food, fodder, and fuel. Fertilizer use has also been declining as the Government has phased out fertilizer subsidies.

The country's oilseed milling industry, which processes peanuts, accounts for about 12 percent of total industrial output.

The commercial animal feeding sector in Senegal consists of only a handful of modern poultry farms. Growth in the consumption of poultry meat and eggs is constrained by low incomes and the availability of less expensive fish landed along the coast.

Because the country is predominately Muslim, the swine industry is practically nonexistent.

Fishing is a major industry in Senegal. The majority of the fish catch, estimated at about 420,000 metric tons annually, is generated by small-scale operators who provide fish to the domestic market. The industrial fishing sector is geared to export and includes both Senegalese vessels and vessels of foreign companies operating under license.



Senegal at a Glance

Population (1989): 7.3 million

Urban population: 35%

Population growth rate: 3%

Per capita income (1989): \$480

Land use: Crops 27%, meadows and pastures 30%, forest and woodland 31%, other 12%

Major crops: Peanuts, millet, rice, sorghum, corn, cotton

Livestock sector: Fish, poultry, sheep

Leading agricultural exports: Fish, peanuts and products, cotton, vegetables

Leading agricultural imports: Rice, wheat

Agricultural imports as a share of total imports: 25-30%

U.S. share of total agricultural imports: 10-15%

Percent of labor force in agriculture: 70%

Membership in economic or trade organizations: ACP, ECOWAS, FAO, GATT, IBRD, IMF

Agricultural Production

	1989/90	1990/91
	thous. metric tons	
Crop production¹		
Cassava	59	70
Corn	131	133
Millet	640	514
Peanuts	820	679
Rice	168	156
Seed cotton	29	36
Sorghum	127	147

¹ Crop years are July-June.

Production trends

Unfavorable weather conditions caused overall agricultural production in Senegal to fall in 1990/91. Peanut production declined 18 percent, despite

an area increase of 17 percent, as yields tumbled over 30 percent.

The increase in peanut area was at the expense of millet. Peanuts and millet compete for land, with farmers shifting between the cash crop, peanuts, and the subsistence crop, millet. Millet production declined in 1990/91, as area fell by 88,000 hectares and yields by about 12 percent. Sorghum, rice, and corn production increased because larger planted area more than offset lower yields caused by the adverse growing conditions.

Farm and food policy

Faced with a growing public debt and increased pressure from international lenders to curb public spending, the Government began to reform its farm policy in 1986. The Government had traditionally played a major role in directing the agricultural sector. Government programs included extension and advisory services to farmers, setting of producer prices of key commercial crops, exercising monopoly purchasing power for a number of crops, and distributing all agricultural inputs on credit.

The new agricultural policy is an attempt to reduce Government subsidies; to disengage the Government from production, storage, and distribution decisions; to privatize the input supply system; and to raise consumer prices to encourage domestic cereal production. These goals have been partially achieved. Input subsidies and credit

programs have been eliminated, support prices on coarse grains have been removed, and the domestic grain market has been liberalized.

The Government has, however, retained its role in extension, advisory, and research services. It also continues its hold of security stocks of seed and grains, and regulates the market for oilseeds.

Peanuts have always received special attention from the Government. The state-associated oil milling company has had a monopoly on selling peanuts and the oil and meal on domestic and foreign markets. However, in line with the new agricultural policy, millers are now free to make their own marketing arrangements, and private brokers and traders are authorized to buy peanuts directly from farmers and sell them to the mills.

The Government also remains heavily involved in the rice sector, driven by a desire to reduce Senegal's dependence on imported rice. The policy has substantially increased the producer price. In an attempt to meet its cost-cutting goals, the Government has ceased all assistance for land preparation and maintenance.

Trade trends

Imports of food products account for about one-fourth of Senegal's total imports. Even in the best of years, Senegal falls far short of meeting its requirements for rice and wheat. The Government also depends on rice imports for a significant portion of its revenue. The Government is the sole importer of rice for general consump-

tion. It usually buys 100 percent broken rice and resells it at far above world market prices. Some of the profit covers the losses incurred from buying domestically produced rice.

The United States exported \$16.6 million worth of agricultural products to Senegal in 1990, a 55-percent decline from 1989. This decline was led by a \$20-million drop in U.S. rice sales, down to \$9.6 million in 1990. The decline in rice exports was due to the loss of \$17.5 million in broken rice sales. Other U.S. exports included \$1.3 million in wheat and wheat flour, \$1.2 million in corn, \$3.3 million in inedible tallow, and \$255,560 in powdered milk.

Senegalese exports of fish, including canned fish, totaled \$163 million in 1989, while exports of peanuts and peanut products accounted for \$157 million. Each of these items contributed about 20 percent of Senegal's total export earnings that year.

Trade policy and prospects

The Government has ended most of its quantitative restrictions on imports. However, it maintains some quantitative restrictions on imports of rice and sugar, and requires licenses for imports of packaged rice. Imports are subject to a flat duty of 15 percent, a fiscal duty at rates ranging between zero and 98 percent, and a value-added tax of from 7 to 30 percent. Exports of peanut oil and meal are subject to export taxes of 20 and 10 percent, respectively. ■

Profile of agriculture

Agriculture is Sierra Leone's most important sector of the economy, contributing roughly two-fifths of the gross domestic product and employing two-thirds of the labor force. Subsistence farming dominates. Rice, the most important staple food crop, is grown by about four out of every five farmers. Rice farming, which is indigenous in swamps and coastal areas, is mostly a subsistence crop because of the lack of inputs and capital investment. Labor is also in short supply because of the greater appeal of cash wages paid in the diamond fields.

Other important food crops are corn, cassava, and peanuts. The most important export crops are cocoa and coffee.

The livestock sector remains underdeveloped because of weak consumer purchasing power, limited production of feed, and relatively high production costs. Only poultry and pigs are raised commercially.

Sierra Leone's waters are rich in fish and shellfish. The country exports shrimp and some lobster to Europe.

Production trends

Sierra Leone's main crop, as well as the mainstay of the national diet, is rice. Rice supplies over 50 percent of total calories in rural diets. Rice production was severely disrupted in 1991 as rebel activity related to the civil war in Liberia prevented planting in large areas of Sierra Leone.

Preliminary estimates reveal that production likely fell from 310,000 tons of milled rice in 1990 to only 210,000 tons in 1991. Now that the rebel activity has ceased, production is expected to recover, but lack of inputs, particularly seed supplies, will limit increases. Rice consumption was, thus, expected to fall

sharply in 1991 and 1992 since the country lacks the foreign exchange to import enough rice to cover the sharp decrease in production.

Sierra Leone was once a net rice exporter, but subsidized imports in the 1970's and early 1980's proved a disincentive to production. Rice production in a normal year now falls short of national consumption by roughly 25 percent, or over 100,000 tons. The Government's effort to market rice imports without subsidies has eliminated most of the exaggerated swings in domestic prices of the past.

Prior to the rebel activity, higher domestic farm prices as a result of the liberalization of the rice market had led farmers to plant more area and to use more inputs.

High transport costs, lack of adequate storage capacity, the high cost of agricultural inputs, and stiff competition from low-cost Asian suppliers make the Government's goal of self-sufficiency in rice difficult to achieve.

Coffee and cocoa production declined substantially in 1991 as a result of rebel activity and lack of buying activity on the part of the Sierra Leone Produce Marketing Board. In 1990, a shortage of currency complicated buying by the Produce Marketing Board and may have hurt coffee and cocoa exports.

Sierra Leone produces about 600 tons of tobacco, largely dark fire-cured, and small amounts of flue-cured. The Government has banned the possession, sale, and smoking of foreign cigarettes as a means of reducing the smuggling of tobacco products. Reportedly, the ban on imports has boosted consumption of domestic cigarettes by 70 percent. Total consumption is estimated at about 1.5 billion cigarettes.

The national sheep herd was estimated at 320,000 head as of February 1990. The poultry industry produces about 600,000 birds a year.



Sierra Leone at a Glance

Population (1990): 4.1 million

Population growth rate: 2.6%

Per capita income (1988): \$250

Land use: Crops 27%, meadows and pastures 31%, forest and woodland 29%, other 13%

Major crops: Rice, corn, cassava, cocoa, peanuts, coffee, tobacco

Livestock sector: Poultry, sheep, fish, hogs

Leading agricultural exports: Cocoa, coffee, tobacco, ginger

Leading agricultural imports: Rice, wheat and wheat flour, sugar, powdered milk

Agricultural imports as a share of total imports: 30-35%

U.S. share of total agricultural imports: 10-15%

Percent of labor force in agriculture: 65%

Membership in economic or trade organizations: ECOWAS, FAO, GATT, IBRD, IMF

Farm and food policy

Sierra Leone's foremost farm problem is to feed a rapidly growing population at affordable prices. Food is the largest single expenditure facing consumers, accounting for more than 40 percent of the cost of living for urban consumers. Little progress has been made on the 1986 "Green Revolution" Plan, a Government initiative to achieve

food self-sufficiency. One of the main production problems is the absence of a land tenuring policy, which has kept some of the most fertile land in Sierra Leone out of production.

Until 1989, extensive Government regulation dominated the country's agricultural pricing and marketing systems. Rice purchases, imports, and distribution were the traditional monopoly of the Sierra Leone Produce Marketing Board (SLPMB), which distributed rice at heavily subsidized prices to the armed forces, hospitals, prisons, and Government officials. Rice distribution through commercial channels was also carried out at Government-subsidized prices. Purchase and exports of coffee and cocoa also were the sole responsibility of the SLPMB.

Deregulation of rice imports, pricing, and marketing was finally achieved in August 1989. Additionally, in 1989 the purchase and export of coffee and cocoa were opened to locally owned private companies. Producer prices offered by the SLPMB for these products now serve as a minimum guarantee for farmers (currently not less than 60 percent of f.o.b. prices). The SLPMB now openly competes with these private companies in buying and exporting agricultural products.

The Government helps farmers by subsidizing the plowing, harrowing, and seeding of land. The Government has a monopoly on imports of fertilizer, and it supplies fertilizer to farmers at subsidized prices. However, limited Government resources and increased

burdens of supporting refugees as a result of the Liberian conflict have sharply curtailed the amount of aid farmers receive.

Trade trends

Sierra Leone is a net agricultural importer. Food imports in 1990 were estimated at about 30-35 percent of total imports of \$182.6 million, and food exports were estimated at 10 percent of total exports of \$105 million. Despite efforts to increase rice production, imports have been rising in recent years. Imports were 99,000 tons in 1989, 108,000 tons in 1990, and roughly 135,000 tons in 1991. The import and marketing of rice has been conducted through private commercial channels since August 1988.

Wheat and wheat flour imports, estimated at 30,000 tons in 1990, have not changed much in recent years. U.S. agricultural exports to Sierra Leone consist primarily of U.S. Government-assisted shipments of rice and wheat, and donations of flour, vegetable oil, and powdered milk.

U.S. agricultural exports were valued at \$7.4 million in 1990, consisting of \$5.9 million in grains, \$1.0 million in vegetable oil, and \$148,000 in livestock, dairy products, and poultry.

Crops grown for export include coffee, cocoa, and palm kernels. Sierra Leone's coffee exports totaled 8,505 tons in 1990. Exports in recent years have averaged about 9,600 tons annually, but wide swings have occurred as a result of poor weather. All coffee exported must be prepared for export by the Sierra Leone Produce Marketing Board.

Cocoa exports totaled 6,078 tons in 1990/91, versus an average of 7,000 tons

over the past decade. Sierra Leone now has a cocoa processing plant, which produces cocoa powder for both domestic consumption and export. As a consequence, unprocessed cocoa exports have fallen off in recent years. In 1991, exports of both coffee and cocoa were reduced because of production shortfalls because of rebel activity which caused large areas to remain unharvested.

Trade policy and prospects

After years of a gradually deteriorating economy, Sierra Leone has begun taking steps towards economic reform. Trade-related measures taken include the introduction of a flexible exchange rate, the elimination of export and import licenses, the adoption of a new customs system, tighter controls on Government spending, and the signing of several agreements with foreign investors. By removing export taxes, the Government expects to increase exports of nontraditional crops such as palm kernels, kola nuts, ginger, piassava, cashews, and peanuts.

In the past, Sierra Leone's economic problems have left only a small market for U.S. products. The situation is changing, however, as U.S. goods become more competitive and have an excellent reputation for quality. Processed foods are in demand.

A budding tourist industry may offer some potential for larger processed food imports in the future. With some of the best swimming beaches in West Africa, Sierra Leone has a small but growing tourist trade. ■

Singapore

Profile of agriculture

Singapore's total area is 329 square miles, inhabited by 2.7 million people. Only 4 percent of this small land area is arable. The climate is equatorial.

Agriculture claims only 1 percent of gross domestic product, and less than 1 percent of the work force.

At present, only 2 percent of Singapore's land area is used for farming activities. The rapid development of public housing estates, new industrial parks, and public works has led to substantial encroachments into agricultural areas.

Recognizing the major constraints imposed by scarce land and water resources, the Government has set up 10 agrotechnology parks totaling 2,000 hectares with the capacity to accommodate about 500 highly intensive farms for the production of eggs, vegetables, ornamental fish, ducks, and milk.

The Government is sponsoring projects to make Singapore self-sufficient in fish.

Domestic production meets about 12 percent of poultry meat and 37 percent of hen egg consumption in Singapore. The country is self-sufficient in pork but

completely dependent on imports for its beef and mutton requirements.

The Government intends to use the agrotechnology park system as a regional center, providing research and consultant services for the Southeast Asian region.

Production trends

Despite the small amount of land devoted to agriculture, Singapore produced about 9,000 metric tons of vegetables in 1990. The cultivation of orchids, ornamental plants, and tropical fish for export is expected to increase with the addition of new high-tech farms. As part of the Singapore Master Plan, 300 hectares of land have been set aside for orchid farming. When all the orchid farms are in full operation in 1995, exports of cut flowers are expected to increase from the 1991 level of \$12 million to \$42 million.

Another agricultural development is the increased production of hen eggs. About 27 million dozen hen eggs are produced annually. When the agrotechnology parks are fully developed in 1995, this figure is expected to increase to about 52 million dozen hen eggs, or about 85 percent of total consumption.

The Government is developing controlled environment hydroponic farming technology for intensive vegetable cultivation. The project will develop glasshouses that use low-cost cooling methods instead of expensive air-conditioning.

Farm and food policy

Singapore's farm and food policy is based on four tenets: national security, leadership in the fields of agrotechnology and biotechnology, development of hard currency earnings, and public health.

In preparation for a national emergency, rice and sugar importers are required to have in storage 2 tons of product for every 1 ton they sell on the Singapore market. Through the



Singapore at a Glance

Population (1991): 2.7 million

Urban population: 100%

Population growth rate: 1.4%

Per capita income (1991 est.): \$13,690

Land use: Crops 11%, meadows and pastures 0%, forest and woodland 5%, other 84%

Major crops: Vegetables

Livestock sector: Poultry—broilers and layers

Leading agricultural exports: Wood products, coffee, spices, edible vegetable and animal oils, fruits, vegetables, beverages, fish and fish preparations

Leading agricultural imports: Fruits, vegetables, wood products, coffee, spices, fish and fish preparations, beverages, grains, cereal products, edible vegetable and animal oils, meat and meat preparations, dairy products

Agricultural imports as a share of total imports: 7%

U.S. share of total agricultural imports: 7%

Percent of labor force in agriculture: 0.4%

Membership in economic and trade organization: APEC, ASEAN, GATT

Agricultural Production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Crop production		
Fruits	1	1
Vegetables	9	10
	<i>mil. head</i>	
Livestock numbers		
Broiler hens	4.0	4.0
Ducks	5.0	5.0
	<i>million dozen</i>	
Animal product output		
Eggs	27	35

¹ Estimated.

agrotechnology park system, many farm operations are chosen based on the perceived needs of the country in the case of a national emergency. Hence, many of the farms in the parks focus on egg, milk, and poultry production. The

Value of Agricultural Imports, 1990

	Total imports \$ mil. ²	U.S. share %
Selected products		
Animals, live	208	0
Beverages	397	1
Coffee and spices	324	2
Dairy products and eggs	244	3
Fish and fish preparations	437	1
Fruits and vegetables	734	11
Grains and cereal preparations	258	6
Meat and meat preparations	211	22
Vegetable oils	309	1
Wood products	204	8
All agricultural products³	3,966	7

¹ Estimates based on Singapore Government data for the first 9 months of 1991, CIF basis.

² Values are shown in U.S. dollars at U.S.\$1=1.72 Singapore dollars.

³ Includes products not listed.

Government has set the following production goals based on domestic consumption: poultry, 15 percent; eggs, 87 percent; ducks, 87 percent; and vegetables and fish, 20 percent.

Investment in hydroponic and aeroponic farms, aquaculture facilities, as well as laboratories devoted to animal husbandry, biology, and genetic research is being sought and developed. The agrotechnology system is also being used to develop export industries such as ornamental fish and plant farms.

In the interest of improving public health standards, Singapore is also changing the meat and poultry distribution system to improve sanitation standards.

Trade trends

Singapore is almost completely dependent on foreign suppliers for its food requirements. Singapore's agricultural imports increased from \$3.3 billion in 1990 to an estimated \$4.0 billion in 1991.

Agricultural exports also followed this trend, increasing from \$2.6 billion in 1990 to an estimated \$3.1 billion in 1991. Singapore is a major trading nation and serves as a regional entrepot trade center. Most imported agricultural products are not retained for the small domestic market, but rather reflect the demand for the products in the re-export markets of Malaysia, Indonesia, Brunei, Philippines, Thailand, and other Asian countries.

The largest import increases were for live animals (for local slaughter), dairy produce, fish and fish preparations, fruit and vegetables, beverages, and vegetable oil. Concurrently, exports of beverages, fish and fish preparations, coffee, spices, fruits, vegetables, and miscellaneous food preparations rose significantly.

Imports from the United States rose from \$212 million in 1990 to about \$308 million in 1991, capturing about a 7-percent share of all agricultural imports. Major agricultural imports from the United States include \$82 million worth of fruits and vegetables, \$47 million worth of meat and meat preparations, and \$21 million worth of miscellaneous food preparations. An estimated \$200 million worth of agricultural products were exported to the United States in 1991, primarily coffee, spices, fish, and fish preparations.

Trade policy and prospects

Singapore is a strong advocate of free trade and free trading practices. Any restrictions on trade would hinder its large re-export trade. Except for tobacco, alcoholic beverages, and sugar-based confectionery, practically all

agricultural products enter and leave Singapore free of duties. Health certificates are required for livestock and all products containing meat. Singapore also has strict regulations on additives, packaging, and labeling.

The Government encourages food imports from as many competing sources as possible, thereby allowing the local population to benefit from competitively priced food supplies from all over the world.

Several factors should be kept in mind when considering the Singapore market. These include ethnic diversity (the population is 76 percent Chinese, 15 percent Malay, 8 percent Indian, and 1 percent other); and that local traditions, tastes, and eating habits still dominate the food market, although changes are occurring, especially among young people.

Traditionally, Singapore imports most of its high-value products from the European Community, Australia, and China. U.S. high-value products with a sizable position in the Singapore market include frozen chicken parts, fresh and canned fruits, and food and beverage concentrations/ preparations for the food manufacturing industry.

With Singapore's rising income levels and the fast expansion of the tourist trade, U.S. export opportunities lie in the high-value products complex, including snack foods, confectionery, new-to-market, ready-to-eat meals, beverages, and processed meats.

Singapore is a member of ASEAN, the six-nation group that includes Malaysia, Indonesia, Brunei, the Philippines, and Thailand. Recently, this group has shifted its emphasis from the political arena toward closer economic cooperation within ASEAN, as well as between ASEAN members and a looser grouping of East Asian economies. ■

South Africa

Profile of agriculture

South Africa is slightly larger than Texas, New Mexico, and Oklahoma combined. It is, on the whole, a dry, hot,

country with a mean annual rainfall of about 20 inches. Much of the rainfall in the interior is barely sufficient for dryland crop production.

The lack of important arterial rivers or lakes requires extensive water conservation and control measures.

Conditions in South Africa are generally less than favorable for agriculture. In addition to lack of water, it has fairly limited land with a high agricultural potential. While 83 percent of the land area is used for agriculture, only 15 percent is considered arable. In spite of the limitations, South Africa's diversity in climate and topography enable it to produce almost every kind of crop.

The country has two agricultures: one is modern, technologically advanced, and diversified, producing a wide variety of commercial, market-oriented products; the other is a large subsistence agricultural sector. Although agriculture plays a major role as a means of livelihood, it contributed only 5 percent to the country's gross domestic product in 1990.

South Africa is self-sufficient in most foodstuffs and is a major food exporter. The exceptions are the crops with heavy water requirements, such as rice, and the tropical crops such as coffee, tea, and natural rubber. Most of these crops are grown locally but not in sufficient volume to satisfy domestic demand.

Production trends

In the past decade, crop production has declined significantly, while livestock and horticultural activities have grown. In 1990/91, animal husbandry constituted 47 percent of the value of agricultural production.

Drought and loss of Government subsidies since the early 1980's, when it could no longer afford guaranteed support, have forced up agricultural prices to uncompetitive levels on world markets.

A massive 1987 land conversion scheme to return marginal cropland to



Agricultural Production

	1989/90	1990/91
	<i>thous. metric tons</i>	
Crop production¹		
Avocados	52	49
Bananas	231	223
Citrus	763	880
Corn	8,900	8,200
Cotton lint	46	47
Deciduous fruits	915	943
Grapes	102	111
Pineapples	197	210
Potatoes	1,269	1,383
Sorghum	275	240
Sugarcane	18,636	18,198
Sunflowerseed	650	575
Tobacco	27	32
Tomatoes	389	455
Wheat	1,702	2,238

	1989	1990
	<i>mil. head</i>	
Livestock numbers²		
Cattle	13.4	13.5
Goats	5.7	5.0
Hogs	1.7	1.7
Sheep	32.7	32.6

	1989/90	1990/91
	<i>thous. metric tons</i>	
Animal product output³		
Beef and veal	661	678
Butter	17	21
Cheese	48	46
Eggs ⁴	346	355
Milk	2,525	2,628
Mutton and lamb	238	236
Pork	128	134
Poultry meat	563	580
Wool	97	103

¹ Various production seasons.

² As of August each year.

³ July/June.

⁴ Million dozen.

South Africa at a Glance

Population (1990): 40.6 million

Urban population: 60%

Population growth rate: 2.7%

Per capita income (1990): \$2,600

Land use: Crops 11%, meadows and pastures 65%, forest and woodland 3%, other 21%

Major crops: Deciduous, citrus, and subtropical fruits; sugarcane; corn, wheat; sorghum; sunflower; peanuts; tobacco; cotton

Livestock sector: Beef and dairy cattle, sheep (wool), poultry, goats (mohair), wildlife, including ostriches

Leading agricultural exports: Fresh fruits, wool, sugar, cereals, canned fruits, hides and skins, forest products

Leading agricultural imports: Wheat, rice, vegetable oils, barley malt, tobacco, oilseed meal

Agricultural imports as a share of total imports: 7%

U.S. share of total agricultural imports: 8%

Percentage of labor force in agriculture: 30%

Membership in economic and trade organizations: GATT, ISO, IWC

permanent pasture led to a 1-million-hectare decline in area planted to the main crops by 1990.

Because of drought, the volume of agricultural production in 1990/91 was 4 percent below the previous year, whereas value rose 4 percent, still well below the nearly 17-percent inflation rate.

Production of field crops declined 16

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Barley malt	43.5	—
Cotton	23.7	2
Forest products	143.4	—
Oilseed meal	24.8	—
Poultry meat	17.4	8
Rice	87.4	39
Seeds	14.4	37
Tallow	14.2	17
Tobacco	41.2	2
Vegetable oils	80.0	5
Wheat	89.2	15
All agricultural products²	1,154.8	8

¹ Values are shown in U.S. dollars at U.S.\$1=2.56 rand.

² Includes products not listed.

percent in 1990/91. Production of corn, by far the most important field crop, at 8.4 million metric tons, was well below the 11.6 million tons produced in 1989/90. Planted area was smaller, and deficient rainfall and an early freeze at the end of the growing season combined to reduce average field crop yields.

On the other hand, livestock production rose 4 percent in 1990/91, and horticultural crops were up 6 percent.

Serious drought continued during the 1991/92 season, and field crop production is likely to be only 50 percent of normal. Corn production may drop to under 3 million tons. Livestock production will also decrease because pasture conditions are extremely poor. Major selloffs of beef and dairy herds are anticipated as the dry winter months of May through September approach. Production this season of crops other than corn—soybeans, peanuts, sorghum, and potatoes—is expected to drop to 30-50 percent of normal, and projected wheat and sugar crops for 1992/93 face 25- to 35-percent reductions.

Farm and food policy

Prior to 1980, the Government provided guaranteed support prices, and subsidized crop inputs, credit, marketing, and rural infrastructure. In the 1980's, when the Government could no longer afford this system, it began to permit market forces to play a role in setting producer prices and to encourage free market competition.

The Government is, however, still involved in agricultural marketing, although it is moving toward privatization of its crop marketing control boards. UNIFRUCO, a private company, has taken over the functions of the now-defunct Deciduous Fruit Board.

Twenty-one control boards still function. In 1989, these boards controlled marketing of about 67 percent of the total value of agricultural production. An additional 11 percent of the value of agricultural production was marketed under other types of Government control. Marketing of the remaining 22 percent of agricultural products was free of Government control.

The modern and technically advanced food processing and distribution system is concentrated among a few big conglomerates. Several big modern and advanced supermarket chains control the food retail system.

Trade trends

In 1990, South Africa's agricultural exports (including forest products) were valued at \$2.6 billion, versus agricultural imports of \$1.15 billion, to give a positive agricultural balance of trade of \$1.45 billion. Agricultural imports constituted 7 percent of all imports while agricultural exports earned 11 percent of all export income. The main imports were wheat, rice, and vegetable oils. Rice and plant proteins and oils are regular imports, while other imports vary according to seasonal conditions.

The United States supplied about 8 percent by value of South Africa's agricultural imports in 1990. The most

important U.S. products were rice, seeds, tallow, and wheat.

South Africa's main export earners were fresh fruits, wool, sugar, cereals, canned fruits, hides and skins, and forest products. With the scaling down of grain production, South Africa is expected to play a smaller role in the grain (mainly corn) export markets in the future, and may import these commodities (mainly wheat and feed grains) more often.

South Africa also has a major forest industry based on plantation production, and exports a substantial volume of timber products.

The recent political developments in the country are leading to the gradual withdrawal of trade sanctions which have hampered agricultural exports over the past few years. More markets are opening up to South African exports, but at this stage exportable supplies of most products are limited and mainly absorbed by the markets that were developed during the sanctions period. South Africa has, however, regained its U.S. sugar quota and some fruit and fruit products should reach the U.S. market in 1992.

Trade policy and prospects

The Government has stated its intention to comply with the General Agreement on Tariffs and Trade (GATT) requirements for agricultural trade. Compliance will entail moving away from the traditional quantitative import control system towards an import levy system. Oilseed meals have already moved to a levy system.

South Africa still requires import permits for a wide range of products, although the list has been shortened. The Government imposes import surcharges to protect its balance of payments, which is under pressure from debt obligations as well as the legacy of the financial and trade sanctions against the country. ■

Profile of agriculture

Agriculture's contribution to Spain's overall economy is substantially less important now than it was in the years prior to accession to the European Community (EC) in 1986. Nonetheless, agriculture still employs 12 percent of the country's total work force, and accounts for about 5 percent of gross domestic product.

Livestock and poultry are the most important sectors in terms of value of agricultural production, accounting for 40 percent of the total. Horticultural crops (citrus, deciduous fruit, olives and olive oil, nuts, wine, and vegetables) are the second most important sector in value (35 percent), but account for over 70 percent of agricultural exports. Field crops (grain, tobacco, cotton, forage, sugar beets, and oilseeds) cover a larger

area, but provide only 25 percent of the value of total production.

Harsh terrain and limited rainfall as a result of the predominantly Mediterranean climate have contributed to the traditionally low productivity of Spanish agriculture.

However, significant expansion of irrigation and other technological advances in recent years has resulted in considerable gains in productivity. Despite these efforts, Spanish agriculture still lags behind other European countries in several sectors such as grain and livestock.

Although Spain is a major exporter of fruits and vegetables, it has developed a large agricultural trade deficit. Since it joined the EC, imports (grains, meat, livestock products, sugar, and soybeans) have increased faster than exports.

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Alfalfa	13,477	13,991
Almonds (unshelled)	150	165
Barley	9,414	8,500
Lemons	620	527
Olive oil	626	570
Oranges	2,565	2,490
Tangerines	1,515	1,330
Vegetables and melons	15,578	13,935
Wine ¹	42,597	32,569
Wheat	4,700	4,900

Livestock numbers

Cattle		
Beef	5.1	5.0
Dairy	1.5	1.5
Hogs	16.0	16.1
Poultry	494.0	521.0
Sheep	24.0	24.5

¹ Thousand hectoliters.



Spain at a Glance

Population (1990): 39.4 million

Urban population: 70%

Population growth rate: 0.3%

Per capita income (1991): \$13,500

Land use: Crops 41%, meadows and pastures 21%, forest and woodland 31%, other 7%

Major crops: Grains, citrus and other fruits, vegetables, wine grapes, olives
Livestock sector: Beef and dairy cattle, hogs, chickens, sheep

Leading agricultural exports: Fresh citrus, fresh vegetables, processed fruits and vegetables, fresh noncitrus fruit, wine, olive oil

Leading agricultural imports: Forest products, soybeans, hides and skins, soybean meal, coffee, meat, tobacco, corn

Agricultural imports as a share of total imports: 11 %

U.S. share of total agricultural imports: 15 %

Percent of labor force in agriculture: 12 %

Membership in economic or trade organizations: EC, FAO, GATT, OECD

Production trends

The agricultural sector has not reaped the full benefits it expected from entry in the EC in 1986. Many sectors have had difficulties competing with increased competition from other EC countries, while the most competitive sectors, such as horticultural crops, have not significantly increased production or exports.

Spain is subject to EC agricultural policies, which have not always favored production of the most competitive Spanish crops.

Livestock production has been increasing in recent years and should continue this trend. The largest increase has been in pork production. Spain has the second largest number of hogs in the EC after Germany. Pork production is expected to continue to increase because of profitable prices and lower feed prices. Lamb production has also increased due to high EC subsidies.

Beef production is expected to fall in the future because of lower consumption and unprofitable prices in production areas. Few changes in production are expected over the next few years in the poultry sector.

EC policies are the main factors in shifting production patterns for grains and oilseeds. The EC oilseed program announced at the end of 1991 is expected to encourage a shift in production from wheat and barley into sunflowerseed production. Direct subsidies and high intervention prices have resulted in a large increase in the area planted to durum wheat and rice. This trend is

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Coffee	275	0
Corn	287	83
Corn germ meal	19	73
Corn gluten feed	93	99
Cotton	193	28
Forest products	1,078	13
Hides and skins	250	4
Meat	627	2
Peanuts	28	53
Rice	77	32
Sorghum	51	59
Soybean meal	295	1
Soybeans	643	58
Tobacco	318	58
Walnuts	32	93
All agricultural products²	9,230	15

¹ Values are shown in U.S. dollars at U.S.\$1=101.80 pesetas.

² Includes products not listed above.

expected to continue through the next few years, as long as the EC continues its current policy.

Vegetable production for fresh consumption and processing has been stagnant since entry into the EC. The sector has been hurt by rapidly rising costs and the strong value of the Spanish currency. The poor performance has drawn into question many assumptions about the large horticultural potential of Spain.

The dairy sector is undergoing a crisis as a result of higher imports from other EC countries and over production of milk. Spain is under heavy pressure from the EC to reduce production, since actual production is an estimated 1.5 million tons above Spain's EC quota of 4.5 million tons.

Low prices the past few years have helped to hold down increases in citrus area. Only marginal changes are expected in citrus production during the next few years.

Farm and food policy

As a result of Spain's accession to the EC, agricultural policymaking is increasingly being transferred away from the Government to the EC.

During 1990, Spain continued to harmonize its agricultural policies with those of the EC. Most policy actions revolved around modernization of farms and farm structures, and irrigation of dry land areas. All policies are scheduled to be the same as in other EC countries by 1996. In some areas, such as grains, policies are already harmonized.

Trade trends

Traditionally a net agricultural importer, Spain experienced a record agricultural trade deficit of \$1.1 billion in 1990. While exports of agricultural products increased to \$8.1 billion in 1990 from \$6.8 billion in 1989, imports increased even more, rising to a record \$9.2 billion in 1990 from \$7.8 billion in 1989. Spain's balance of trade in agricultural products has steadily declined since entry into the EC.

Imports of forest products, wheat, corn, sugar, soybeans, beef, pork, dairy products, poultry, and tallow showed the greatest increases.

In 1990, the United States enjoyed its best agricultural trade year with Spain since accession to the EC, with sales amounting to \$1.4 billion.

In 1990, Spain's largest purchases from the United States were soybeans, corn, tobacco, forest products, and corn gluten feed. The United States supplied all or virtually all of Spain's imports of corn gluten feed, brewers' dregs, confectionery sunflowerseeds, walnuts, almonds, and corn seed.

Once again in 1990, citrus fruit was Spain's most important agricultural

export commodity in both volume and value. Exports of 2.3 million tons were 4 percent above 1989 in terms of volume and 18 percent above 1989 in value.

Increases were also recorded in other leading export commodities, including fresh vegetables, processed fruit and vegetables, noncitrus fruit, wine, olive oil, and barley.

Trade policy and prospects

As agreed in the Treaty of Accession to the EC, Spain's customs duties on imports from other EC member countries are being reduced annually and must be completely eliminated by Jan. 1, 1993. Duties on imports from non-EC countries, as well as quantitative restrictions and other similar trade measures, also have to be aligned with those of the EC by 1993.

The period during which other EC members are required to drop duties on agricultural imports from Spain is a bit longer, depending on the commodity. Some duties and import restrictions imposed on Spanish products, particularly fruits and vegetables, will remain in place up to Jan. 1, 1996. Starting in 1996, Spain will be completely integrated in the EC.

Early in 1992, Spain lifted its ban on imports of fresh apples and pears from the United States. Imports from Washington and Oregon are allowed under the revised phytosanitary requirements. An import ban is still in place for other fresh deciduous fruit.

In 1991, the EC agreed to a 1-year extension of the U.S. - EC Enlargement Agreement, under which Spain annually imports 2.3 million tons of corn, sorghum, and specified non-grain feed ingredients. The agreement was negotiated to compensate the United States for loss of corn and sorghum exports to the Spanish market as a result of Spain's accession to the EC. ■

Sri Lanka

Profile of agriculture

Agriculture remains the mainstay of the Sri Lankan economy, accounting for 25 percent of the gross domestic product and 45 percent of the employment, but other sectors such as textiles and food processing are growing rapidly and providing employment in this densely populated country.

Land holdings are small, often a hectare or less, and usually split between some flat land planted to paddy rice, and

hillier areas which are in perennial crops. Plantation crops, such as tea, rubber, coconut, and spices, remain the dominant feature of the agricultural economy, and account for 47 percent of foreign exchange earnings. Tea, which is grown in the south central highlands, accounts for over 60 percent of the agricultural export earnings.

Rice is the major field crop. Crop production is heavily dependent on rainfall in the 2 monsoon seasons, 1 from the southwest during the summer or "yala" season, and 1 from the northeast which provides water for the winter or "maha" crops. Irrigation infrastructure continues to be developed in the northern and eastern parts of the country, especially along the Mahewali River, in order to increase planted area.

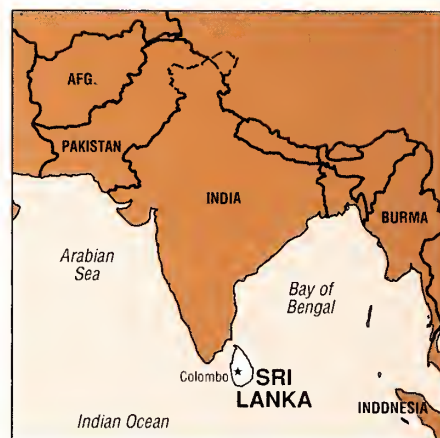
The wetter southern area, where coconut and rubber is produced, is the most densely populated part of the island, and rising land prices are pushing thousands of hectares of crop area out of production annually. The Government has tried to supplant that loss by opening up lands in the northeast, but progress has been slowed because of political unrest in that region.

Production trends

Production of rice, the main staple in the Sri Lankan diet, has not been able to keep pace with population growth in recent years, partly due to the political unrest in the northeast and to a slowing in yield increases. Sri Lanka now expects to maintain about 85 percent self-sufficiency in rice production, with production at 1.7 million tons.

Tea production reached a record level of 233 million kilograms in 1990 and is thought to have exceeded 240 million kilograms in 1991 as more "low grown" teas, cultivated on small holdings at lower elevations, were produced.

Current low world prices will lead to decreased plucking and input use for the 1992 crop, and production is forecast to decline. Tea yields are comparatively



Sri Lanka at a Glance

Population: (1991 est.): 17.4 million

Urban population: 21%

Population growth rate (1991): 1.2 %

Per capita income (1990): \$380

Land use: Crops 33%, meadows and pastures 7%, forest and woodland 37%, other 23%

Major crops: Paddy rice, cassava, tea, sugarcane, rubber, spices, sweet-potatoes, coconut

Livestock sector: Poultry, cattle, buffalo

Leading agricultural exports: Tea, rubber, coconut, spices, cashews, tobacco

Leading agricultural imports: Wheat and wheat flour, cotton, sugar, powdered milk, rice

Agricultural imports as a share of total imports: 26%

U.S. share of total agricultural imports: 21%

Percent of labor force in agriculture: 45%

Membership in economic or trade organizations: CCC, FAO, GATT, IBRD, SAARC

Agricultural Production

	1989	1990
	<i>thous. metric tons</i>	
Crop production		
Cassava	420	384
Coconut ¹	2	3
Green chilies	68	100
Green gram	20	27
Groundnuts	7	6
Maize	31	33
Onions	77	73
Rice	1,403	1,726
Rubber	111	114
Soybeans	2	3
Spices ²	57	59
Sugarcane	132	120
Sweetpotatoes	86	77
Tea	207	233

	<i>thous. head</i>	
Livestock numbers		
Buffalo	967	958
Cattle	1,820	1,773
Goats	518	522
Hogs	94	85
Poultry	8,833	8,797
Sheep	30	26

Animal product output

Eggs ³	888,750	817,350
Milk ⁴	238	292

¹ Million nuts.

² Cinnamon, pepper, cardamom, cloves, nutmeg, and avocanut.

³ Thousand eggs.

⁴ Million liters.

poor in Sri Lanka. Increasing tea estate productivity is a Government priority, since the area planted to tea is expected to remain stable.

Seeking more income from their small holdings, farmers are experimenting with crop diversification and intercropping, especially in traditional coconut cultivation areas.

Diversification programs focused on traditional field crops in the past, and soybean and corn production did increase significantly in the early 1980's.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Cotton	123	—
Flour	35	74
Milk and milk products	58	1
Rice	32	—
Sugar	110	1
Wheat	88	86
All agricultural products 2	487	21

¹ Values are shown in U.S. dollars at U.S.\$1=40.06 rupees.

² Includes products not listed.

However, soybean and corn production now appear to have stabilized, as farmers seek to plant more remunerative crops such as gherkins, black gram, chick peas, pepper, pineapples, melons, and vegetables.

While the poultry sector has shown some growth in recent years, livestock production generally has remained stagnant and serves mainly as a source of draft power and of supplemental income for the rural poor.

Farm and food policy

The traditional agricultural goal of the Government was to attain self-sufficiency in rice production. After additional area was brought under cultivation, and more high-yielding varieties were used, rice production more than doubled between 1975 and 1985. Since that time, output has leveled off.

In keeping with bold measures to reduce public ownership and control of industry, the Government is taking major steps to reduce its active intervention in the agricultural economy. The Government, formerly the sole purchaser of rice, now provides only a minimal price support function, purchasing 1 percent of total production. The Government still retains price controls over wheat flour

and bread and controls wheat imports.

The Government has also focused on increasing productivity in the plantation crop sector, especially tea, and is planning to privatize management of Government-owned tea estates, to take effect in 1992.

Trade trends

Sri Lanka is a net agricultural exporter. Exports were valued at \$720 million in 1990, dominated by tea exports, worth \$495 million. Agricultural imports totaled \$487 million. The composition of the export basket has been fairly stable, but exports of minor agricultural products have been increasing.

The quantity and value of Sri Lanka's tea exports is a major determinant of the health of the economy. The disruption in export markets for tea, which started during the Gulf War, hurt Sri Lanka's exports in 1991 as the traditional market to Iraq was lost. The subsequent drop in Soviet buying further depressed tea prices. Tea export value was down significantly in 1991, but is expected to rebound in 1992 because of increased buying by Middle Eastern countries. Tea sales to the United States are flat.

The Government is promoting 1992 as the year of exports, which includes pushing a greater diversity of agricultural exports. Sri Lanka has the potential to provide many niche agricultural goods, as has been demonstrated by its recent emergence as a major exporter of gherkins, especially to France and the United States.

Sri Lanka is a consistent and significant importer of basic food commodities, especially sugar and wheat. Around 300,000 tons of sugar are imported annually, most of it coming from India. Wheat consumption has been increasing steadily following greater urbanization, and imports totaled 670,000 tons in 1991. The United States is the major supplier of wheat, providing grant aid and credit

assistance through various Government programs.

Sri Lanka imported about 150,000 tons of rice in recent years, and is expected to continue imports at that level.

Cotton imports have increased to meet the needs of the growing export-oriented textile industry.

Trade policy and prospects

While Sri Lanka would like to be more self-sufficient in basic food commodities, agro-climatic conditions have proved more favorable for the production of export crops. The Government's focus has shifted away from self-sufficiency to a greater market orientation, and encouragement of exports.

The Government recognizes the need to promote exports of higher quality teas to minimize the susceptibility of the economy to price fluctuations, and to focus on maintaining the high quality of its coconut and spice exports. The current hope is for private sector development of agricultural niche exports.

The environment for agricultural imports has been liberalized somewhat. The Government continues to have a monopoly on the importation of flour, onions, and lentils. Private sector rice imports were first allowed in 1988, through the Government still controls licensing of the firms which may import rice.

Sri Lanka used to import wheat flour, but the construction of a large flour mill in the late 1970's turned the country into a wheat importer. Flour imports still occur occasionally to meet special needs.

The Government still maintains a large presence overseeing agricultural trade. It allows imports, but often under special licensing procedures. The Government is reviewing its plant quarantine regulations, which until now have included severe restrictions on imports of seeds and plant materials. ■

Profile of agriculture

Sweden occupies 60 percent of the Scandinavian Peninsula. Fifteen percent of its land area lies north of the Arctic Circle. The climate is generally continental, with cold winters and mild summers. Farming is concentrated in central, and especially southern Sweden, which has large fertile areas.

Agriculture is a highly productive enterprise in Sweden, despite the country's northern location and long winters. Although only 8 percent of Sweden's land is cultivated for agricul-

ture, Sweden is over 90 percent self-sufficient in agricultural production.

Agriculture contributes about 5 percent to Sweden's gross national product and employs about 3 percent of the labor force. The farms are small but highly mechanized.

Sweden's agriculture is focused on dairy products and meat, which together account for about 75 percent of total farm sales. Although cattle numbers have declined since the 1960's, higher yields have resulted in surplus milk. Sweden's grain yields also rank among the world's highest.

Sweden is a large net exporter of grain, dairy products, livestock, poultry, meat products, and fish.

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Barley	2,122	1,869
Oats	1,584	1,412
Potatoes	1,180	1,200
Rapeseed	367	332
Sugar beets	2,776	1,430
Wheat	2,243	1,525

	<i>thous. head</i>	
Livestock numbers¹		
Cattle		
Beef cows	75	87
Calves	630	595
Dairy cows	555	508
Heifers, bulls	437	470
Hogs	2,264	2,170
Poultry	8,635	8,404
Sheep	400	402

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	145	149
Butter	76	65
Cheese	108	102
Eggs ²	179	170
Milk, cow	3,520	3,242
Pork	293	275
Poultry meat	45	47

¹ August estimates.

² Million dozen.



Sweden at a Glance

Population (1990): 8.6 million

Urban population: 85%

Population growth rate: 0.4%

Per capita income (1991): \$27,743

Land use: Crops 7%, meadows and pastures 2%, forest and woodland 64%, other 27%

Major crops: Barley, wheat, sugar beets, oats, potatoes, rapeseed

Livestock sector: Poultry, hogs, dairy and beef cattle

Leading agricultural exports: Forest products, hides, beef, pork, grains, dairy products

Leading agricultural imports: Coffee, wines, fresh fruits and vegetables, beef, pork, hides, tobacco, soybean meal and soy oil

Agricultural imports as a share of total imports: 10%

U.S. share of total agricultural imports: 6%

Percent of labor force in agriculture: 3%

Membership in economic or trade organizations: EFTA, GATT, OECD

Production trends

Production of most crops decreased in 1991 when weather returned to normal after 2 unusually favorable years.

In 1991, grain production decreased 20 percent to 5.1 million tons, and rapeseed production was down 10 percent from the record high 1990 level. In 1991, milk production declined 8 percent, after the Government implemented a dairy-herd reduction program. Beef production increased by about 4,000 tons in 1991.

Milk and red meat production and consumption are now almost balanced.

Farm and food policy

In 1990, the Swedish Parliament approved an agricultural reform policy, intended to lower food prices and to dismantle Sweden's long-standing agricultural price regulation system that guaranteed high farm prices without regard to demand. The goal was to move toward a market-oriented system in which demand directly influenced agricultural production levels.

The major reasons for the change in policy were pressure to make Sweden's agricultural support structure conform to the goals of the General Agreement

on Tariffs and Trade (GATT) multilateral trade negotiations, the necessity to reduce Sweden's high food costs, and failure of the previous policy to meet its objectives.

Implementation of the new policy began in July 1991 with the lowering of import levies. The value-added tax on food was lowered from 25 percent to 18 percent, effective Jan. 1, 1992. The Government will institute a stricter policy on competition, especially at the

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Almonds	18	89
Apples	74	9
Beef	43	16
Forest products	1,755	4
Hides	67	0
Horses, live	30	50
Pears	27	41
Pork	42	14
Rice	22	50
Tobacco	51	51
Wines	130	3
All agricultural products²	5,183	6

¹ Values are shown in U.S. dollars at U.S.\$1=5.90 kroner.

² Includes products not listed.

trade level. Both administered internal prices and market interventions will be eliminated together with all export subsidies.

Thus far, the reform program has accomplished some of its goals. Exportable production surpluses have decreased. Average retail food prices increased by only 2.3 percent in 1991, compared to an overall 8.1-percent increase in the total Consumer Price Index (CPI). In January 1992, food prices decreased an average 3.7 percent following the cut in the value-added tax on food. On the negative side, farm income has gone down, and hundreds of farmers have gone into bankruptcy.

The new policy will be phased in over a 5-year transition period, with generous Government subsidies to ease the transition. Government-guaranteed producer prices for grains are being temporarily continued, but will be

reduced in annual steps until they are eliminated by 1994. Price support for oilseeds is financed by a levy on domestic production and on imports of vegetable fats and oils. The Government is also providing subsidies for regional assistance and poor farmers.

Under this policy, Swedish agriculture is to be subject to the same market disciplines as other sectors of the Swedish economy. These reforms hold some implications for the United States. By 1995, Sweden may no longer be competing in international grain markets, since grain production is expected to decline and the export surplus eliminated.

Trade trends

Sweden is a net agricultural exporter, with imports totaling nearly \$5.2 billion in 1990, versus exports of \$12.1 billion. Sweden's leading import category is forest products, totaling \$1.8 billion in 1990. Paper and paper products account for about two-fifths of the forest product import total, followed by pulpwood, chips, and lumber, with a one-third share.

Coffee was Sweden's second largest agricultural import in 1990, and table wines were also a significant import. Fruits, principally bananas, apples, tomatoes, and oranges, were another large import item.

Sweden's agricultural imports (including forest products) from the United States in 1990 were valued at \$322 million, up \$51 million from 1989. This amount represented approximately 6 percent of Sweden's total agricultural imports, the same percentage as a year earlier.

Sweden exported \$12.1 billion in food and agricultural items (excluding forest products which totaled \$10.7 billion) in 1990. About 9 percent of the total food, agricultural, and forest product exports went to the United States—mainly oats, cheese, beef, pork, and vodka.

Sweden's grain exports in 1990 rose

26 percent to \$271 million. Dairy, eggs, meat, and meat product exports also increased, and oilseed exports were about double the 1989 level.

Trade policy and prospects

Sweden applied to join the European Community (EC) on July 1, 1991. The Government hopes that implementation of the new agricultural reform policy will go a long way to adjusting to EC norms before EC membership, thus avoiding a difficult transitional period.

Sweden maintains import tariffs, levies, and other restrictions to protect its agricultural processors. These restraints protect commodities produced in Sweden, such as meats, dairy products, and grains.

Farm prices are protected by reference prices, as in the EC, which the Government has maintained by import levies and direct intervention. Import levies can be raised or lowered when the difference between the domestic reference price and the world market price deviates.

Sweden's system of import tariffs, and other import restrictions, as well as export subsidies is being changed. The previous agricultural price regulation system will be made to conform with the new agricultural policy.

Although most tariffs are low, imports of some fruits and vegetables (those that are grown in Sweden) are subject to high seasonal tariffs.

Differences between high domestic prices and export prices are covered by funds derived from various fees and taxes imposed on farmers. Thus, farmers pay virtually all of the export subsidies on agricultural commodities and products. During a 3-year transition period, the Government will also appropriate some funds for export subsidies for meat. ■

Switzerland

Profile of agriculture

Forests and pastures, often on steep terrain, occupy about half of this small, mountainous, landlocked country. Intensive crop farming is limited to a few areas, and small-scale family farms are widespread. The average farm size is

slightly larger than 11 hectares, including part-time farms. In 1990, about 55 percent of the farms had a full-time labor force.

Swiss agriculture has a high technological level and producers enjoy high prices. However, the high input costs because of the expensive economic environment dilute the price and technological advantages. The Government encourages the production of farm products in difficult areas for food security reasons.

In 1990, agriculture accounted for about 3 percent of the country's gross domestic product. The largest farm sector by far is dairy. Milk accounts for one-third of total farm output by value. Beef and pork production also accounts for a large share, followed by wine grapes, grains, poultry, fruits, and vegetables.

Despite limited agricultural output, the country is roughly two-thirds self-sufficient in food production and completely self-sufficient in some commodities, such as dairy, bread wheat, pork, animal fats, and potatoes.

Production trends

In 1990, the total value of agricultural output fell 2 percent to \$6.3 billion. The price drop would have been greater had it not been for Swiss agricultural policies which support prices for many commodities, even when domestic supplies increase.

Swiss farmers are perhaps most competitive in the production of milk and milk products. Milk products, such as cheese, are the most important agricultural export for Switzerland. Costly new environmental and animal rights legislation may, however, place Swiss farmers at an increasing disadvantage on the world market.

Wheat production again increased in 1990; the resulting surplus was used for animal feed, displacing imports. To protect the environment and reduce yields, the Government is providing



Switzerland at a Glance

Population (1991): 6.8 million

Urban population: 60%

Population growth rate: 0.6%

Per capita income (1990): \$18,700

Land use: Crops 11%, meadows and pastures 40%, forest and woodland 26%, other 23%

Major crops: Sugar beets, grains, fruits, vegetables

Livestock sector: Poultry, cattle, hogs

Leading agricultural exports: Cotton and products, dairy products, wood and forest products

Leading agricultural imports: Wood and forestry products, fruits, cotton and products, vegetables

Agricultural imports as a share of total imports: 9%

U.S. share of total agricultural imports: 5%

Percent of labor force in agriculture: 4%

Membership in economic or trade organizations: EFTA, FAO, GATT, IBRD, ICCO, ICO, IDA, ISO, IWC, UNCTAD

higher support prices for wheat produced with little or no chemicals.

In 1989 and 1990, prices for meat (beef and pork) decreased significantly. Production consequently declined and is likely to stay depressed as long as the costs for such inputs as forage and feed concentrates remain high.

Potato area and production were stable; self-sufficiency is close to 100 percent. A further increase in production is likely because of good growing conditions and a very competitive

Agricultural Production

	1989	1990
	<i>thous. metric tons</i>	
Crop production		
Apples	198	311
Grains, bread	642	592
Grains, feed	745	690
Potatoes	890	857
Rapeseed	54	43
Sugarbeets	889	975
Wine grapes ¹	1,747	1,334

	<i>thous. head</i>	
Livestock numbers ²		
Cattle		
Cows	806	790
Other	1,044	1,070
Chickens		
Broilers	2,332	2,020
Growers	778	987
Layers	2,815	2,815
Goats	69	68
Hogs	1,869	1,784
Sheep	371	399

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	156.6	164.5
Butter	39.0	37.9
Cheese	133.0	132.0
Eggs ³	692.0	635.0
Milk		
Cow	3,889.0	3,866.0
Sheep, goat, mare	19.0	18.0
Pork	280.3	269.6
Poultry meat	32.5	33.1
Sheep meat	4.1	4.5

¹ Thousand hectoliters.

² April census.

³ Million eggs.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Almonds	26.4	71
Beef	55.8	13
Corn	12.9	3
Cotton raw	137.0	49
Durum wheat	22.7	49
Fats and oils	82.1	3
Fruits	557.0	5
Furs and furskins	103.8	5
Meat of horses, donkeys, etc.	30.4	48
Oilseeds	113.3	17
Pet food	187.3	4
Rice	24.6	86
Tobacco	137.7	44
Vegetables	334.8	4
Wood and forest products	906.4	1
All agricultural products ²	6,101.3	5

¹ Values are shown in U.S. dollars at U.S.\$1=1.47 francs.

² Includes products not listed above. Excludes fish.

processing industry.

Rapeseed production will remain low, meeting less than one-fourth of the Swiss demand.

The Government hopes to solve domestic surplus production by marketing agricultural products more widely. With high labor costs and topographic and climatic disadvantages, Switzerland finds it difficult to be competitive on world markets.

Farm and food policy

The Swiss constitution provides the foundation for agricultural policy. Its two primary objectives are preservation of farmers through a viable agriculture, and stockpiling to ensure the availability of food. Agricultural policy is required by the constitution to maintain the existing level of food self-sufficiency (60

to 65 percent), safeguard emergency stocks, and support farming in Alpine and other difficult zones.

Swiss producers are highly supported; approximately 70 percent of gross farm income is attributable to Government intervention. Most Swiss producer prices are double those of neighboring Germany. However, Swiss input costs are considerably higher than in Germany.

Anticipated policy reforms will increase farmers' dependency on free market prices to the extent that Government fixed income supports are reduced. Greater emphasis is likely to be placed on specialty livestock and crop production, and part-time farming will increase further. Pollution and environmental standards will need to be harmonized with the European and world standards. Swiss farm groups are against any cuts in Government support.

The food retailing system is highly concentrated. Two grocery chains represent nearly one-half of grocery sales.

Trade trends

In 1990, Switzerland, a net food importer, bought \$6.1 billion worth of foreign agricultural products, compared to \$5.5 billion in 1989. The European Community (EC) is the top agricultural supplier to Switzerland, accounting for about two-thirds of total agricultural imports.

Swiss agricultural exports amounted to \$3 billion in 1990. Even with only 60-65 percent food self-sufficiency, agricultural trade is only a small part of total Swiss trade (9 percent for imports and 5 percent for exports).

Switzerland's primary agricultural imports are wood and forestry products, fruits, vegetables, and cotton and products. The country's agricultural exports are small, with cheese being the main item. Other exports are manufactured cotton, wood products, food preparations, cocoa and products, and

manufactured tobacco.

Swiss agricultural imports from the United States increased 18 percent in value to \$287 million. The U.S. market share for imports of bulk products has showed a long-term decline.

The United States' three biggest exports to Switzerland are cotton, tobacco, and almonds. All of these processing industries—textiles, cigarette manufacture, and confectioneries—are thriving, and continued increases in imports from the United States are forecast. In addition to these commodities, the market potential for processed, high-value products is promising.

Trade policy and prospects

Switzerland participates in negotiations in the GATT on liberalizing multilateral trade, and between the EC and European Free Trade Association (EFTA) countries on improving economic cooperation. A successful outcome of the GATT negotiations will likely force changes in current Swiss farm policy. EC-EFTA negotiations specifically excluded agricultural policy.

Agricultural reform has become a major issue in Switzerland. The Government's position is that EC membership for Switzerland is inevitable and, therefore, Swiss agricultural policies and regulations should be adjusted to adapt to this inevitability. The Government has used the multilateral trade negotiations being conducted under the auspices of the General Agreement on Tariffs and Trade (GATT) to justify policy reform proposals. The success or failure of the GATT negotiations will dictate the speed of the structural adjustments in the Swiss agriculture.

In addition to GATT and EC-EFTA negotiations, developments in eastern Europe also will markedly influence future Swiss agricultural and economic policies. ■

Profile of agriculture

Situated on the east coast of the Mediterranean Sea, Syria has three geographical zones: the western coastal strip, the interior mountains, and the barren desert to the east, which is crossed by the Euphrates River.

Syria's western coastal strip is well watered from subterranean aquifers, intensely farmed, and densely populated. Completion of large irrigation projects such as the Euphrates Dam has allowed considerable expansion of cultivation on formerly barren land in the interior. Larger crop production is moving Syria closer to its goals of greater food self-sufficiency and larger exports.

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Apples	205	225
Barley	500	926
Citrus	363	430
Corn	130	175
Cotton	441	540
Olives ¹	461	250
Sugar beets	582	600

Livestock numbers

	<i>thous. head</i>	
Cattle		
Beef	255	275
Dairy	532	550
Poultry	14,794	16,000
Sheep	14,500	15,000

Animal product output

	<i>thous. metric tons</i>	
Beef and veal¹	108	120
Butter	3.5	4
Cheese	65	68
Milk	1,331	1,400
Mutton and lamb ²	1,094	1,200
Poultry meat	60	65

¹ Off-year or biannual crop cycle.

² Thousand head.

The country, however, continues to be a net importer of agricultural products.

Syria has a large and well-diversified agricultural base. Agriculture employs about 26 percent of the labor force. Because of the vagaries of weather, particularly rainfall, production is subject to considerable variations from year to year. Production of grains, cotton, pulses, sugar beets, fruits, and vegetables contributed 27 percent to the gross domestic product in 1990.

Most farms are small peasant holdings up to 10 hectares in size.

Production trends

The 1991 crop year suffered from a number of weather-related problems. Despite drought-breaking rains in the spring of 1991, rainfall distribution was sporadic beginning in the middle of March. High-velocity winds in May took a toll on the wheat and barley crops. Nevertheless, agricultural production in 1991 did increase over the drought years of 1989 and 1990.

Wheat production was up by 24 percent to 2.1 million metric tons, and barley was up 85 percent to 926,000 tons. Thanks to sufficient irrigation water, cotton and citrus production reached a record high in 1991. Production of animal products also increased, as a result of better feed availability and price incentives.

Farm and food policy

The Government's stated policy is to achieve greater self-sufficiency in major food items, including wheat, feed grains, fruits, vegetables, and animal products.

Another target is to increase export revenues through exports of cotton and some fruits and vegetables by increasing both production and added value from processing.

Since 1986, the Government has shifted its investment priority from industry to agriculture. Increasing irrigated areas is a major goal for the Syrian Government, and work is



Syria at a Glance

Population (1991): 12.5 million

Urban population: 6.3 million

Population growth rate: 3.7%

Per capita income (1989): \$1,600

Land use: Crops 31%, meadows and pasture 46%, forest and woodland 3%, other 20%

Major crops: Barley, sugar beets, cotton, grapes and other fruits, olives, corn, chickpeas, vegetables, lentils, wheat

Livestock sector: Poultry, sheep, goats, beef and dairy cattle

Leading agricultural imports: Cigarettes, wheat and wheat flour, corn, dairy products, rice, soybean meal, sugar, vegetable oil

Leading agricultural exports: Cotton lint, fruits and vegetables, lentils, live sheep

Agricultural imports as a share of total imports: 28%

U.S. share of total agricultural imports: 36%

Percent of labor force in agriculture: 26%

Membership in economic or trade organizations: CCC, FAO, IBRD, IDA, IDB, IFAD, IMF, UNCTAD

proceeding on many irrigation projects throughout the country to make use of all available water resources. Irrigation water is sold to farmers at nominal prices from these projects.

This policy has encouraged farmers to doublecrop large areas with corn following the wheat harvest in the spring. In the coastal area, market incentives are encouraging farmers to

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Corn	60	33
Rice	36	5
Seeds for planting	53	0
Soybean meal	21	75
Wheat	15	30
Wheat flour	11	40
All agricultural products²	668	36

¹ Values are shown in U.S. dollars at U.S. \$1=11.225

² Syrian pounds (official exchange rate).

³ Includes products not listed.

shift from traditional crops, such as peanuts and tobacco, to citrus and vegetables.

Support prices for major grains and field crops are the Government's major tool for regulating agricultural production. In addition, the Government subsidizes fuel, fertilizers, electricity, and other inputs, including seeds for selected crops. The agricultural cooperative bank provides easy credit for buying field crop seeds, fertilizers, beehives, and for constructing greenhouses and poultry farms. Beginning in late 1990, input subsidies were cut sharply to reduce the public sector deficit.

The Government encourages the formation of peasant cooperatives to purchase inputs from Government entities at discounted prices.

In 1986, the Government permitted the establishment of joint-venture agricultural companies in which the Government owns 25 percent. In 1991, the Government further encouraged private investment in agriculture by permitting establishment of new

companies with import exemptions and tax holidays. Food processing is a major field of interest by investors. Most of the investments are for facilities to process fruits (citrus juice), and to grade and pack fruits (mainly citrus and apples), and vegetables (mainly tomatoes, potatoes, cucumber, and squash). Canning and cold storage plants will be expanded.

The Government has only a minor role in the marketing process and food products are distributed to consumers through small, independent traders.

Trade trends

Since the early 1970's, Syria has been a net importer of agricultural products. Syrian agricultural exports are expected to increase in the future, while the trade deficit is likely to continue.

Cotton lint, the primary earner of foreign exchange, is exported to neighboring countries, as well as to North African and European destinations. Other traditional exports have been apricot paste, licorice root, thyme, peanuts, oriental leaf tobacco, and green pistachios. The Government has begun to encourage exports of value-added products, such as textiles and finished garments.

The traditional markets for Syrian agricultural products continue to be neighboring Lebanon and Jordan, as well as Saudi Arabia and other Gulf countries. In 1991, efforts were made to export apples to Spain.

Trade policy and prospects

During the 1970's and 1980's, all imports and exports of major food commodities were restricted by law to specialized public-sector trading organizations. The only exception was feed imports, which private firms were permitted to transact. In 1989, the Government began to permit private firms to use export revenues to import

commodities formerly reserved to the public sector, such as rice, sugar, tea, and coffee. In 1990, this list was expanded to include vegetable oil, ghee, powdered milk, and butter.

Wheat and wheat flour imports may be handled only by the public sector. Despite the private sector's expanding role, the public sector also continues to import a major portion of the country's requirements of rice, sugar, coffee, and tea.

Customs duties on food commodities and animal feeds are relatively low. All customs duties are still computed at the official exchange rate of 11.2 Syrian pounds (SP) to the United States dollar, about one-fourth the official parallel rate.

Syria does not impose any value-added tax on agricultural products. However, agricultural imports, like other imports, are subject to a unified tax ranging from 7 to 34 percent, depending on the rate of the custom duties. In late 1991, another tax was imposed on imports of corn and barley in order to raise the landed prices of these imported commodities to a level equivalent to the local crop price level.

Agricultural products are subject to export taxes, making them less competitive in export markets.

In 1991, the Government announced several measures to encourage the private sector to export agricultural products. The private sector is permitted to use 75 percent of foreign exchange generated from agricultural exports for the import of items in high demand, such as pick-up trucks, which otherwise cannot be imported. ■

Taiwan

Profile of agriculture

Taiwan is dominated by a high mountain chain that occupies two-thirds of the island's total surface area. Taiwan has a monsoon climate, which is hot, humid, and rainy from May to September. Average annual rainfall is 98 inches.

The Taiwan economy has shifted dramatically during the past several decades from an agricultural base to a growth-driven industrial economy. Agricultural production, which represented 30 percent of gross domestic product 20 years ago, now claims 4 percent, and is expected to decline to 2.8 percent by 1996. About 13 percent of

the 8.4 million people in the labor force participate in agriculture.

Average farm size is 1 hectare. As more and more of Taiwan's 1.1 million farmers are searching for alternative sources of income, part-time farming is becoming not only popular but necessary. This recent trend developed because of decreasing profits for small operations, increased size of operations that requires more capital, and land use shifting away from agricultural uses. According to 1990 census figures, as much as 80 percent of average farm household income came from non-farm sources.

Island-wide labor shortages are affecting all sectors of Taiwan's economy, but the problem is particularly acute in agriculture.

Taiwan's agricultural structure is showing a trend toward larger scale and more specialized farming operations. The impact has been most noticeable on hog, rice, and sugarcane production where larger scale production is more feasible. Specialty and high-value crops are also being encouraged and are increasing.

Production trends

The outlook for the agricultural sector of Taiwan is generally negative. Production levels for most crops continue to decline because of the lack of profitability, labor shortages, and competing land uses. Unlike crops, production levels for livestock have not declined because of the sector's relative profitability and integration level.

Hog and pork production, one of the most important agricultural enterprises, has increased steadily in the past, but has a questionable future because of environmental and economic pressures.

Perceived water pollution problems have resulted in more stringent waste treatment regulations which will increase hog production costs. Predictions are that hog numbers will increase somewhat in the next 2 years,



Taiwan at a Glance

Population (1991): 20.4 million

Urban population: 76%

Population growth rate: 1.09 %

Per capita income (1991): \$8,085

Land use: Crops 25%, meadows and pasture 5%, forest and woodland 55%, other 15%

Major crops: Fruits, rice, sugarcane, vegetables, tobacco, peanuts

Livestock sector: Poultry, hogs, dairy and beef cattle, aquaculture

Leading agricultural exports: Pork, aquaculture and sea products, canned and frozen vegetables

Leading agricultural imports: Logs and lumber, corn, cotton, hides and skins, soybeans, dairy products, fishmeal, fish products, wheat

Agricultural imports as a share of total imports: 11%

U.S. share of total agricultural imports: 40%

Percent of labor force in agriculture: 13%

Membership in economic or trade organizations: APEC, ICAC, IWC

then gradually decline.

Areas planted to rice and sugarcane continue a steady decline, though annual production fluctuates because of weather. A rice diversion program, now in a second 6-year cycle, has shifted land to corn and sorghum production which are subsidized at three times the world price. Sugar production will be trimmed back 5 percent to meet only domestic demand.

Output of fruits, mainly produced in the central and southern parts of

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Corn	394	383
Fruits	2,357	2,313
Rice	1,807	1,828
Sugar ¹	514	464
Tobacco	19	21
Vegetables	2,713	2,847

	<i>thous. head</i>	
Livestock numbers ²		
Cattle		
Beef	53	58
Dairy	79	80
Hogs	8,565	9,000
Poultry		
Chicken	76,979	75,760
Ducks and geese	12,474	11,000

	<i>thous. metric tons</i>	
Animal product output		
Beef	5	6
Eggs ³	371	366
Milk	204	225
Pork	1,009	1,010

¹ Refined sugar.

² As of Dec. 31 of year specified.

³ Million dozen; includes chicken and duck eggs.

Value of Agricultural Imports, 1991¹

	Total imports \$ mil. ²	U.S. share %
Selected products		
Barley	34	0
Beef	195	15
Corn	760	95
Cotton	613	21
Dairy	269	9
Fishmeal	250	11
Fruit and nuts	155	59
Hides and skins	550	39
Logs and lumber	940	20
Sorghum	10	0
Soybeans	490	96
Tobacco leaf	70	70
Wheat	136	85
Other	1,728	25
All agricultural products³	6,200	40

¹ Estimates.

² Values shown in U.S. dollars at U.S.\$1=26.80 Taiwan dollars.

³ Includes products not listed.

Taiwan, is declining slowly, mainly because of low profits. Some fruit is grown on fragile slope land and a soil conservation program will return this area to forest use over the coming 3 years.

Vegetable production is likely to remain stable. However, unpredictable typhoons occasionally disrupt production, causing increased prices and additional import demand. Vegetable prices and production in 1991 were moderate because of the absence of damaging typhoons.

Eel, tilapia, and shrimp are produced mainly in southern Taiwan. Production continues a steady decline that started by disease problems in shrimp. Now, with water being a scarce resource and land conservation questions being emphasized by the authorities, an effort to stop unapproved aquaculture operations is being made.

Farm and food policy

Taiwan's agricultural authorities, the Council of Agriculture (COA), wield a strong influence over agricultural production policy. The Agricultural Adjustment Plan (1991-97) set by the COA will strive to ensure domestic food security and, at the same time, shift the highly protected agricultural sector (which benefits from price supports, high tariffs, import bans, and other trade barriers) to a more market-oriented and environmentally sensitive agricultural policy. The plan sets zero growth in agriculture as a goal through 1996.

Distribution and marketing channels for food products have changed dramatically as a result of higher incomes and changing lifestyles. Previously, daily shopping was done at farmer or peddler markets as well as neighborhood shops. These outlets dominated the retail food business. Now, supermarkets and hypermarkets account for 25 percent of food purchased and will continue to expand.

Trade trends

Taiwan is a net exporter of industrial products, but a net importer of agricultural goods. Traditionally, Taiwan has been a market mainly for bulk commodities and intermediate agricultural products. However, in the past 5 years consumer-oriented high-value product imports increased in response to growing income levels which stimulated demand.

This growing high-value market has benefitted high-quality U.S. food products. In 1991, about 20 percent of imports from the United States were consumer-oriented, high-value products, compared to 12 percent in 1986. The most important of these were dairy products, marine and aquaculture products, fruits, nuts, and beef. Taiwan is a very important market for U.S. producers of beef and fruit. Imports of U.S. beef are recovering after a slump in 1990. Steady growth is expected in the coming years.

Taiwan's livestock and poultry sectors generate demand for feed grain and soybean imports. These sectors are large, highly integrated, and for the most part, price-competitive. This demand, as well as a large and modern flour milling industry, provides an important market for U.S. grain and oilseeds. The future of the hog industry and whether it contracts over the next 3-5 years as a result of stricter pollution controls will play a crucial role in determining the size of the bulk commodity market.

Trade policy and prospects

The Government's policy is to provide a secure food supply and, at the same time, lower barriers to trade to become consistent with General Agreement on Tariffs and Trade (GATT) requirements. To accomplish this, the Government has developed programs to smooth the transition for domestic producers to absorb the shock of lowering tariff rates and nontariff barriers that could disrupt the farm sector.

Trade barriers currently hinder agricultural imports. These include tariff rates as high as from 40 to 50 percent ad valorem for such high-value products as apples, citrus, peaches, grapes, pears, kiwifruit, avocados, fruit juices, soups, raisins and other dried fruit, and processed popcorn. Tariffs on other items are also high. Licenses are required for most agricultural products, some 120 of which require prior approval from COA or other agricultural authority for importation.

Imports of several items are tightly controlled or effectively banned. These include chicken, certain cuts of pork, peanuts, fresh potatoes, animal offals (beef and poultry), red adzuki beans, rice, and sugar. Recently, live hogs, hog semen, and embryos have been added to this list.

In 1990, Taiwan applied to join the GATT. ■

Thailand

Profile of agriculture

Agriculture is one of Thailand's most important sectors, employing over 60 percent of the labor force and using more than 40 percent of the land area. However, the rapid expansion of the manufacturing sector in recent years diminished agriculture's contribution to the gross domestic product from a high of 23 percent 10 years ago to 12 percent in 1990.

Thailand produces an abundance and wide variety of food, making this country

self-sufficient in many of its food requirements. However, some problems plague Thai agriculture. The average Thai farm is only 2-3 acres and not very profitable. Farmers are among the lowest paid workers in the country. Growing industrial development in the central river valley region is pushing up land value. Mass deforestation has become a major concern, convincing the Government to ban the harvesting of teak trees.

The regions of Thailand are agriculturally diverse. The most productive area is located in the lush central Chaophraya River valley region where rice, tobacco, sugarcane, pineapples, and a growing beef and dairy industry flourish. Pineapples, palm oil, rubber trees, and much of the aquaculture can be found in the southern region. Tobacco, soybeans, corn, and rice are concentrated in the northern region. Much of the livestock, tapioca, and rice is produced in the northeast.

Production trends

Production of some major commodities is growing slowly. However, rice production over the past 5 years has remained relatively flat, and significant gains are not expected in the near future because of land and water limitations and continued low fertilizer utilization.

As a result of the increased use of inputs, pineapple production has been increasing, although gains have been tempered by unfavorable weather conditions over the past several years. Favorable prices may lead to additional plantings.

Tapioca production is slipping as farmers switch to more lucrative sugarcane production. Rubber trees are being planted as part of a crop diversification program and should replace some of the tapioca area. Strong gains are expected to continue in rubber production as young trees begin to reach maturity.



Thailand at a Glance

Population (1991 est.): 57.6 million

Urban population: 18%

Population growth rate: 1.6%

Per capita income (1991 est.): \$1,630

Land use: Crops 38%, meadows and pastures 1%, forest and woodland 30%, other 31%

Major crops: Rice, cassava, fruits, corn, sugar, oilseeds

Livestock sector: Fish, poultry, hogs, beef and dairy cattle

Leading agricultural exports: Rice, tapioca, sugar, frozen poultry, pineapples, seafood

Leading agricultural imports: Forest products, cotton, waste from food industry, dairy products, hides and skins, tobacco, fruits, nuts

Agricultural imports as a share of total imports: 6%

U.S. share of total agricultural imports: 15%

Percent of labor force in agriculture: 60%

Membership in economic or trade organizations: ASEAN, APEC, FAO, GATT, INRO

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Cassava	8,260	8,208
Corn ¹	3,800	3,700
Palm oil	200	240
Pineapples	1,510	1,500
Rice	17,500	20,000
Soybeans ¹	530	460
Sugar ¹	3,502	3,700

	<i>thous. head</i>	
Livestock numbers ²		
Cattle		
Beef	4,660	4,830
Dairy	72	89
Hogs ³	4,767	4,613
Poultry		
Broilers ⁴	95,352	103,000
Layers	N.A	N.A

	<i>thous. metric tons</i>	
Animal product output		
Beef	143	149
Eggs ⁵	44	47
Milk	164	200
Pork	394	410
Poultry	655	720

¹ Crop years are July-June for corn, Sept.-Aug. for soybeans, and Dec.-Nov. for sugar.

² Inventory as of Jan. 1.

³ Hogs include breeding stock and slaughter hogs.

⁴ Inventory as of April 1.

⁵ Conversion assumes one egg equals 65 grams.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Cotton	501.8	27
Dairy	164.5	1
Fruits and nuts	32.5	76
Milled products	49.9	3
Rawhide, skin	107.6	6
Tobacco	66.5	92
Waste from food industry	193.5	7
Wood products	570.3	2
All agricultural products ²	2,152.3	15

¹ Values are shown in U.S. dollars at U.S.\$1=25 baht.

² Includes products not listed. Excludes fishery products.

production is proceeding at a rapid pace. However, beef output is lagging as producers struggle to build high-quality breeding stocks from imports.

Farm and food policy

The Government maintains a policy of production supports, export promotion, and import substitution to assist local farmers, traders, and food processors.

A limited amount of financing is still provided to rice growers by the Government, although the program is not fully used. The Government also provides seed and pesticides to assist in the production of various crops. The Government has also helped to support rice prices by purchasing domestic products and assisting exports through Government-to-Government sales that have included loans at below-market interest rates.

The Government has traditionally encouraged and protected local soybean

growers in order to stimulate production and reduce imports. Price support is provided through an agreement with crushers to buy soybeans at an established price level. Crushers, in turn, are protected from cheaper imports through a variety of restrictive measures.

In 1990, in response to the tight protein meal supplies resulting from increased meat production, the Government approved measures to ease imports of soybean meal, fishmeal, and corn. Duties were reduced, and in the case of soybean meal, the import quota was lifted. However, an import surcharge was put in place to protect the prices of locally produced feedstuffs. The surcharge has, at times, priced imports out of the market. However, the new policy, along with growth in the livestock sector, led to larger soybean meal imports in the second half of 1990.

Private firms are very active in Thailand's agricultural sector. The private sector contributes transportation, financing, storage, inputs, and processing. The Government provides research and other support.

Trade trends

Thailand enjoys a substantial surplus in its balance of agricultural trade. Agricultural exports totaled over \$8 billion in 1990 versus imports of less than \$2.2 billion. Thailand is the world's leading exporter of rice, tapioca, canned pineapple, and canned tuna. It is also a major supplier of sugar, poultry, and shrimp. Significant gains in exports of rice and tapioca will probably be constrained by limited production increases, whereas pineapple, poultry, and shrimp exports should register substantial increases.

The United States, a major market for Thailand's agricultural exports, imports substantial quantities of canned pineapple and tuna. Thailand would like to develop the export of poultry and

other fruit products to the United States, and is attempting to comply with U.S. phytosanitary and meat inspection requirements.

Thailand also represents a growing market for U.S. agricultural exports. The United States has attained a large share of Thai imports of cotton, tobacco, and apples, and is forging ahead with efforts to increase its share of imports of wood, wine, specialty meats, livestock, and other processed food items.

Trade policy and prospects

The Government's trade policies are designed to maximize exports and restrict imports. Commodities that the country cannot produce efficiently are protected by high import duties, surcharges, and outright bans. Most processed food products are taxed heavily (60 percent ad valorem plus local taxes) and require a lengthy pre-registration process that can cost up to \$1,000.

A 7-percent value-added tax was implemented on Jan. 1, 1992. Simultaneously, the combined business and municipality tax of 9.9 percent, which applied to most products, was removed. This reform should result in an overall reduction in taxes paid on many commodities. It is uncertain how this tax reform will affect imports of agricultural products.

Centrally located in the ASEAN region, Thailand provides excellent investment and trade opportunities. Movement towards trade liberalization, a healthy economy, a large population, and a growing industrial base are making Thailand an important and attractive market for U.S. agricultural exports. ■

Profile of agriculture

The agricultural profile of Tunisia is essentially Mediterranean, with the chief commodities consisting of fruit, olives, livestock, vegetables, and cereals. Tunisia's agriculture is critically dependent on rain distribution as irrigation covers only about 10 percent of the total cultivated land. Wheat is the dietary staple, and barley is the major feed grain.

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Almonds	52	55
Dates	75	81
Grains	1,633	2,551
Barley	478	721
Bread wheat	225	363
Durum wheat	897	1,424
Triticale	33	43
Olives for oil	650	825
Oranges	123	117
Vegetables	1,807	1,948
Wine grapes	40	45

	<i>thous. head</i>	
Livestock & poultry numbers		
Cattle		
Beef	213	215
Dairy	343	348
Goats	1,050	1,055
Poultry		
Broilers	30,500	30,686
Layers	3,850	3,870
Sheep	5,714	5,750

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	39	40
Cheese	4	5
Eggs ¹	89	90
Lamb	38	38
Milk	400	423
Poultry meat	47	58

¹ Million dozen.

The agricultural sector contributes 14 percent of the country's gross national product, accounts for roughly one-third of all employment, and uses about 35 percent of the arable land.

Tunisia has a mixed economy. Private ownership is extensive but highly regulated. Since the mid-1980's the Government has been moving steadily towards privatization.

The Government is transferring the control of large Government-owned farms to qualified private firms under long-term leases. This move is intended to give market forces a better chance to work and, at the same time, reduce Government losses incurred in managing these farms.

Most of the best agricultural land is in the well-watered northern and coastal regions, with large mechanized and irrigated farms which have received most of the Government's financial support. Farther inland is the traditional rain-fed grain and sheep small-holder economy of central and southern Tunisia, which has received little Government aid.

Tunisia's animal wealth, mostly sheep, poultry, and dairy cattle, is concentrated in the northern and central regions of the country where most of the grain area also is located.

Vegetables and fruits are produced in northern coastal areas. Olive trees are grown in the center and in the east. The deep south is mostly desert, with some oases nourishing date palm trees and pockets of pastures sustaining small herds of sheep, goats, and camels.

The country is self-sufficient in olive oil, fruits, vegetables, eggs, and to some extent poultry meat. In years of favorable weather, Tunisia is self-sufficient in durum wheat and barley, but not bread wheat, which must be supplemented by imports. Tunisia must import meat and milk to meet its domestic needs.

Most of the farms in Tunisia are small, below 5 hectares. Fragmentation of holdings and lack of sufficient and



Tunisia at a Glance

Population (1991): 8.3 million

Urban population: 53 %

Population growth rate: 1.9 %

Per capita income (1991): \$1,615

Land use: Crops 30%, meadows and pastures 19%, forest and woodland 4%, other 47%

Major crops: Wheat, barley, oil olives, citrus, dates

Livestock sector: Poultry, sheep, goats, beef and dairy cattle

Leading agricultural exports: Olive oil, oranges, dates, poultry (layers and hatching eggs), sheep and horses, wine, almonds

Leading agricultural imports: Wheat, corn, soybean meal, powdered milk, vegetable oil, beef, cotton, wood, tobacco cigarettes, sugar, barley, seeds, bred heifers, poultry (layer and broiler chicks), breeding sheep

Agricultural imports as a share of total imports: 12%

U.S. share of total agricultural imports: 17%

Percent of labor force in agriculture: 33%

Membership in economic or trade organizations: AFDB, AMU, CCC, FAO, GATT, IBRD, IDB, IMF, IOOC, IWC, OAPEC

timely credit are major constraints facing small farmers, limiting mechanization and the ability to purchase inputs.

Production trends

Tunisia's agricultural production

Value of Agricultural Imports, 1991

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Animals, live		
Bred heifers	4	—
Day-old chicks	2	—
Barley	7	—
Corn	32	71
Cotton	39	—
Dairy products	27	—
Hides and skins	45	—
Seeds	15	1
Soybean meal	27	14
Soybean oil	25	55
Tobacco and cigarettes	33	15
Wheat	67	53
Wood	66	—
All agricultural products²	602	17

¹ Values are shown in U.S. dollars at U.S.\$1=0.915 dinars.

² Includes products not listed.

varies considerably from year to year, according to weather conditions and rain distribution. The country's agricultural production suffered severe setbacks in 1988 and 1989 because of drought. Production recovered in 1990, then reached a record in 1991, particularly for cereals, which benefitted from abundant and well distributed rains.

Fruits and vegetables are the largest components of the agricultural sector (in value terms) followed by livestock (sheep, poultry, and dairy), and cereals (wheat and barley).

Olive oil, dates, and citrus are leading foreign exchange earners. Exports go mostly to Europe.

The poultry sector is quite developed and Tunisia exports hatchery eggs and 16-week layer pullets to neighboring countries.

The development of Tunisia's own cattle and dairy sectors has been inhibited by the large supply of subsidized beef and dairy products from Europe, but the Government is taking measures to stimulate local production in these sectors. In recent years, benefitting from U.S. export assistance programs, Tunisia imported about 6,000 head of pure-bred Holstein heifers to serve as a nucleus for expansion of the dairy herd.

Tunisia's corn production is insignificant, and growth in the poultry and livestock sector will be dependent on imports of feed grains and protein meals. The country does not produce oilseeds, nor does it have crushing facilities to process oilseed imports.

Farm and food policy

Tunisia's farm and food policy aims at increasing production nearer to self-sufficiency in basic commodities such as wheat, milk, and red meat, and in expanding exports of hatchery eggs and some fruit crops to earn foreign exchange.

In 1991, the Government supported this policy by increasing credit availability and raising producer prices for cereals, milk, and olive oil. It imposed a tax on imported beef and powdered milk to protect domestic producers, and lowered import tariffs on farm machinery and chemicals.

Recently, producer subsidies for farm inputs were sharply reduced to comply with World Bank and International Monetary Fund (IMF) requirements. The Government provides consumer subsidies for basic foods.

The Government provides organizational support for farmer cooperatives and associations, as well as infrastructure support for wholesale marketing of produce, fish, and meat. The Government also encourages exports of key commodities such as olive oil, dates, citrus and other fruits, and vegetables.

Trade trends

In 1991, agricultural imports totaled \$602 million, of which the United States supplied 17 percent. The agricultural trade deficit in 1991 was \$170 million.

Wheat and feed grain imports represent 48 percent of the agricultural import value, vegetable oils 13 percent, and other products such as dairy items and sugar represent 39 percent.

Tunisia generates an appreciable amount of foreign exchange from exports of olive oil—by far the biggest item—dates, citrus, almonds, and wine, laying hens, and hatchery eggs. The European Community purchases most of the Tunisian olive oil, allowing 46,000 metric tons to enter duty free.

Trade policy and prospects

In 1990, the Government accelerated privatization of the agricultural sector that began in 1988, and permitted private firms to import a wide range of farm inputs and agricultural commodities.

Tunisia has gradually eased its import licensing process, particularly for wood, seeds, powdered milk, and livestock feed such as alfalfa pellet imports. However, the Government still controls imports of essential foodstuffs such as wheat, vegetable oil, sugar, and rice.

Tariffs on imported agricultural products range from 15 percent on basic foods such as sugar, to 43 percent on processed food and high-value products such as vegetables and fruit preserves, refined vegetable oils, dried fruits and nuts, wine, and malt.

Tunisia's policy of trade privatization and liberalization of the economy is expected to diversify sources of supply. New opportunities for U.S. suppliers will include seeds, powdered milk, grains, soybean oil, tobacco and tobacco products, soybean meal, raw cotton, wood, dairy cattle genetics, and tallow. ■

Turkey

Profile of agriculture

Slightly larger than Texas, most of Turkey lies in Western Asia (Anatolia), and a small part lies in Europe (Thrace).

Agriculture is an important driving force in the Turkish economy. Thirty-five percent of the population lives in the rural areas and 30 percent of the population is employed in agriculture. Agricultural production contributes nearly one-fifth of total gross domestic product. Major crops include wheat,

barley, corn, pulses, sunflower-seeds, sugar beets, cotton, tobacco, fruits, and vegetables. A significant agricultural processing industry also exists.

Turkey is basically self-sufficient in all major foodstuffs and a net exporter of farm products. Bread, rice, cracked wheat, beans, lentils, and chickpeas are dietary staples. Meat, eggs, and dairy products also are readily available.

The Government's multimillion-dollar development program now underway in the southeastern region includes building a dozen dams on the Tigris and Euphrates Rivers to generate electric power and bring large areas under irrigation for the first time.

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Apples	1.9	2.0
Barley	6.6	6.8
Corn	2.1	2.2
Cottonseed	1.1	0.9
Filberts	0.4	0.4
Grapes	3.5	3.6
Olives	1.1	0.6
Potatoes	4.3	4.5
Sugar beets	1.9	2.0
Wheat	15.5	16.0

	<i>mil. head</i>	
Livestock numbers		
Cattle	12.7	12.2
Beef	3.9	3.6
Dairy	4.5	4.3
Poultry	225.0	240.0
Sheep	45.3	45.0

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	285	300
Butter ¹	111	112
Cheese ¹	214	223
Eggs ²	7.5	7.5
Milk	8,573	8,600
Mutton, lamb, and goat meat	370	365
Poultry meat	269	284

¹ Industrial production only.

² Billion eggs.

Production trends

Targeted agricultural growth of 3.5 percent for 1991 was near expectations and followed an 11.6-percent increase in 1990, when agricultural production recovered from the severe drought of 1989.

Livestock production has been stagnating as cattle and sheep numbers decline steadily. Poultry production, while a much smaller portion of Turkish meat production, has been slowly expanding as consumer acceptance of poultry meat increases.

Farm and food policy

Turkey's long-term priority for agriculture is to achieve self-sufficiency in production and to expand exports.

Support prices and Government subsidies on fertilizer, agricultural credit, and some seeds continue to be the major tools in assisting agricultural production.

The Government continues to encourage double-cropping in suitable areas and the use of high-yielding seeds. Production of corn, soybeans, and other oilseeds is encouraged in crop rotation practices, but farmers have not responded enthusiastically because support prices for those crops have been inadequate relative to wheat. The attractive price support for wheat has contributed



Turkey at a Glance

Population (1991): 57.3 million

Urban population: 65%

Population growth rate: 2.17%

Per capita income (1990): \$1,957

Land use: Crops 34%, meadows and pastures 12%, forest and woodland 26%, other 28%

Major crops: Wheat, barley, corn, pulses, sunflowerseeds, cotton, sugar beets, fruits, nuts, tobacco, olives

Livestock sector: Sheep, goats, dairy and beef cattle, poultry

Leading agricultural exports: Filberts, tobacco, cotton, fresh and dry fruits, citrus, sheep, livestock products, wheat, tomato paste

Leading agricultural imports: Vegetable oils, hides and skins, rice, corn, wheat, wood and wood products, cotton, wool, tallow, tobacco

Agricultural imports as a share of total imports (1991): 7%

U.S. share of total agricultural imports (1991): 21%

Percent of labor force in agriculture: 30%

Membership in economic or trade organizations: EFTA, FAO, GATT, OECD

to excessive wheat plantings, a build-up of wheat stocks, and a deficiency of oilseed production.

The fallow land reduction program successfully increased land usage for lentils, chickpeas, and some fodder crops.

The top priorities for agricultural investment will continue to be land improvement, harvesting, water

Value of Agricultural Imports, 1991

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Barley	11	0
Breeding animals	22	0
Corn	11	100
Cotton	76	39
Hides and skins	220	2
Meat	25	0
Planting seeds	15	33
Rice	38	53
Sorghum	14	100
Soybean meal	15	67
Tallow	25	92
Tobacco	70	100
Vegetable oils	360	14
Wheat	59	0
Wood products	155	26
Wool	177	0
All agricultural products ²	1,400	21

¹ Values are shown in U.S. dollars at U.S.\$1=4,500 lire.

² Includes products not listed.

resources, and irrigation expansion. Currently, 21 percent of agricultural land is irrigated using modern technology. About two-thirds of total investments in agriculture are targeted toward these goals.

Budget constraints as a result of the 1991 Gulf war adversely affected investment projects in 1990 and 1991.

The food processing sector is expanding. Turkish enterprises are growing for processing soups, beverages, fruits, vegetables and some meat. The frozen food industry has started recently and holds good prospects for the future.

The trend in food retailing is away from the family-run stores to larger supermarkets in the larger cities. Several national food merchandising chains dominate food retailing.

Trade trends

Turkey's overall exports increased from \$2.9 billion in 1980 to \$13.6 billion in 1991. Agricultural exports during the same period increased from \$1.7 billion in 1980 to \$2.7 billion in 1991, an increase of 60 percent compared to 370 percent for total exports. Despite these increases in total exports, Turkey continues to run a sizable trade deficit.

Agriculture is an important component of overall trade. In 1991, agricultural imports were 7 percent of the total, and agricultural exports were 20 percent of the total. Agricultural imports have increased as the Government has adopted free market policies.

Turkey in most years is a net exporter of food products. Agricultural exports in 1991 totaled \$2.7 billion versus \$1.4 billion for imports. Agricultural exports in 1991 were \$300 million above the 1990 level, and imports \$500 million lower as agricultural production recovered from the 1990 drought.

Turkey has been shifting from exporting raw agricultural products to exporting more processed items in recent years. The major agricultural export commodities in 1991 were tobacco, filberts, pulses, vegetable oils, grain, cotton, raisins, tomato paste, and citrus. Turkey also exports fruits, vegetables, dried apricots and figs, pistachios, and olive oil.

Significant quantities of Turkish wheat, barley, and flour are competing in most Middle East and North African markets, and reaching the Asian markets of Indonesia and Korea.

Agricultural imports in 1991 consisted primarily of vegetable oils, hides and skins, wool, wood and wood products, cotton, tobacco, wheat, rice, tallow, meat, breeding animals, planting seeds, soybean meal, and feed grains.

In 1991, although the United States had a \$50-million agricultural trade deficit with Turkey, it supplied 21 percent of Turkey's agricultural imports. The most important U.S. shipments were

unmanufactured tobacco, vegetable oils, wood products, cotton, tallow, and rice. In 1991, the United States bought 13 percent of Turkey's agricultural exports, principally oriental tobacco.

Trade policy and prospects

Turkey has been an associate member of the European Community (EC) for some years. The main benefit of this status has been preferential trade terms with the EC member countries.

Turkey applied for full membership in the EC nearly 5 years ago. Since then, the Government has made radical changes in its import regime, in an effort to harmonize the country's foreign trade system with that of the EC. Advance import deposits are no longer required. Many duties and surcharges also have been reduced, making imports cheaper, though some import duties and surcharges remain.

Recent Government policies have eased conditions for imports. As a result, more live cattle for slaughter and meat, fruits, and vegetables were imported in 1990 and 1991.

Turkey's export policies generally aim at promoting value-added exports, while discouraging the export of raw commodities. The main tools employed are tax rebates used to support exports of value-added commodities, and taxes and deposits applied on raw commodity exports such as filberts and dried fruit.

The Government wishes to expand trade with the EC, Central Europe, the Middle East, and North Africa, but is giving special attention to the newly emerged Transcaucasian and Central Asian countries of the former Soviet Union. ■

United Arab Emirates

Profile of agriculture

The agricultural sector of the United Arab Emirates (UAE) is small but varied. Production is limited by long, scorching summers, minimal rainfall, and sandy soil.

Agriculture generates less than 1 percent of gross domestic product, and employs about 6 percent of the labor force.

The cultivable land of 50,000 hectares in 1990 equaled only 1 percent of the UAE's total area. The limited arable area has forced UAE farmers to direct

their efforts to increasing the productivity of the available land.

New methods and the latest agricultural technology have been adopted in many agricultural areas. Mechanization is encouraged by the Government; however, the small average farm size of 2.3 hectares limits the use of fully mechanized agriculture, thereby constraining production gains.

Main products include dates, fresh vegetables, and green fodder. In addition, the livestock sector is expanding. The UAE normally is self-sufficient between November and April for many fresh vegetables such as tomatoes, cucumbers, cabbage, lettuce, carrots, and eggplant. It has also reached 90 percent self-sufficiency in green fodder, 85 percent in fresh milk, 26 percent in poultry meat, and 75 percent in table eggs. The fishery sector is another important source of income. The total annual catch in the UAE is 95,000 metric tons, 25 percent of which is exported. UAE is self-sufficient in seafood.

More than 119,000 hectares are used for planting trees and shrubs, most of which are imported, as wind break.

Production trends

Significant expansion in the agricultural sector has taken place during the past 2 decades. The Government helped to triple the area devoted to agriculture and increase the number of farms by 400 percent between 1971 and 1991. Vegetable production increased almost 10 times, while areas under fodder cultivation rose by five times between 1982 and 1991.

Production levels in the livestock sector have also increased significantly in recent years. Poultry meat, red meat, and poultry egg production has also grown as a result of Government intervention. Fresh milk production increased in the past year by 25 percent.



United Arab Emirates at a Glance

Population (1991): 2.0 million

Urban population: 75%

Population growth rate: 3%

Per capita income (1991 est.): \$17,000

Land use: Crops negligible, meadows and pastures 2%, forest and woodland negligible, other 98%

Major crops: Dates, green fodder, vegetables, citrus

Livestock sector: Poultry, dairy and beef cattle, sheep, goats

Leading agricultural exports: Seafood, vegetables

Leading agricultural imports: Fresh fruits, fresh and packaged vegetables, rice, sugar, meats, meat products

Agricultural imports as a share of total imports: 14%

U.S. share of total agriculture imports: 4%

Percent of labor force in agriculture: 6%

Membership in economic or trade organization: GCC, O.APEC, OPEC

Table egg production grew to 204 million eggs in 1991, up 20 percent over the previous year.

Green fodder production has increased to meet the demands of the livestock sector. Production in 1990 was up one-third from 1989.

Dates, an indigenous crop and a traditional part of the local diet, receive special attention. The Government estimates the number of date trees to be 13 million at present but production data are not available. Because of the absence of date processing and packaging plants, excess production is either fed

Agricultural Production

	1988/89	1989/90
	<i>thous. metric tons</i>	
Crop production¹		
Cabbage	12	41
Eggplants	15	39
Green fodder	351	467
Lemons	14	19
Mangoes	7	7
Tomatoes	26	41

	1989	1990
	<i>thous. head</i>	
Livestock numbers		
Camels	105	113
Cattle	50	49
Beef	24	25
Dairy	26	24
Goats	614	657
Sheep	338	254

	<i>mil. metric tons</i>	
Animal product output		
Eggs ²	170	203
Milk		
Cows	15	21
Goats, sheep and camels	34	38
Poultry meat	14	15
Red meats ³	11	13

¹ Crop years are July-June.

² Million eggs.

³ Includes meat produced from cattle, sheep, goats, and camels.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Edible nuts	82	7
Fruits, non-citrus	145	6
Meats	88	1
Milk and milk products	73	0
Offals and meat preparations	16	7
Poultry meat	13	8
Rice	132	2
Sugar and molasses	125	0
Vegetables ²	166	5
Wood and products	62	2
All agricultural products³	1,651	4

¹ Values are shown in U.S. dollars at U.S.\$1=3.673 dirhams.

² Includes fresh, frozen and preserved.

³ Includes products not listed.

to livestock or destroyed. Several investors are studying the possibility of setting up date processing plants

Farm and food policy

The Government has established incentives to attract more domestic investment in its agricultural and fishery sectors. The UAE is a member of the Gulf Cooperation Council (GCC), and encourages other GCC member countries to invest in the UAE's agricultural sector.

No import protection or quotas are granted to favor local producers. The Government encourages expansion in the agricultural sector by offering free land to interested farmers, and by heavily subsidizing seeds, farm chemicals, and fertilizers.

The Government covers the cost of maintaining and repairing farm machinery and of digging water wells, as well as land, cultivation, farm extension, and training. The Government sponsors many other activities to spur farm productivity such as funds for agricultural research and extension, control of animal and plant diseases, and new production technologies. Agricultural production and marketing are carried out by the private sector. Food products are imported and distributed with minimal Government intervention.

Fresh produce, meat, seafood, and poultry are widely marketed in open-air central markets built and maintained by the local municipalities.

Trade trends

The UAE imports about 80 percent of its food needs. The UAE depends completely on imports for fresh fruits, rice, corn, wheat, wood products, sugar, edible nuts, edible oils, beans, peas, and lentils. It also depends on imports to fill the gap between local supplies and demand for dairy products, vegetables, poultry, and live animals.

Food imports have increased steadily during the past 10 years, to reach \$1.65 billion in 1990. Dependence on foreign markets is expected to rise along with population growth and the limited possibilities for agricultural output.

U.S. food exports to the UAE increased from \$39 million in 1985 to \$64 million in 1990, 4 percent of the country's agricultural imports. The UAE's geographic location and European Community (EC) export subsidies give several EC countries a competitive advantage over the U.S. High ocean and air freight rates from the U.S. to the UAE represent additional constraints to more U.S. food exports.

The United States supplies more than 70 percent of the UAE's total imports of

fresh apples, pears, almonds, corn, juices, and live plants. Imports of U.S. frozen chickens rose from zero in 1985 to 8 percent in 1990. The U.S. share of this market has a great potential for expansion because the local currency is linked directly to the U.S. dollar.

UAE exports of fresh vegetables and seafood remain small compared to the imported volume of food products. The UAE is an excellent reexport center to other Gulf, Asian, and African countries.

Trade policy and prospects

The Government provides all possible help to increase agricultural production, while being realistic about the need for imports. It remains neutral on trade issues and it levies no customs duties or taxes on any types of imported food and agricultural products.

Legislation protects local consumers against food health hazards from locally produced and imported food. All food products must meet certain health requirements and packaged food products must be labeled in accordance with rather strict UAE requirements. The Government enforces quarantine laws for live animals and plants to protect local crops and livestock from disease.

Demand for high-quality value-added products is increasing, which could present some new opportunities for U.S. products. ■

United Kingdom

Profile of agriculture

Agriculture in the United Kingdom (UK), which is comprised of England, Scotland, Wales, and Northern Ireland, is intensive, highly mechanized, and efficient by European standards. However, it produces only about 58 percent of its total food and feed requirements and 74 percent of its temperate-crop food and feed requirements. Grain, oilseeds, livestock, and dairy farming account for the greater part of production. Agriculture accounts for 2 percent of UK gross domestic product, and about the same percentage of the labor force.

Production trends

Weather conditions in the UK in the 1990/91 agricultural year were favorable

Agricultural Production

	1990/91	1991/92
	<i>thous. metric tons</i>	
Crop production ¹		
Barley	8.0	7.9
Mixed grain	0.02	0.02
Oats	0.6	0.5
Potatoes	6.5	6.3
Rapeseed	1.3	1.4
Rye	0.04	0.04
Sugar, raw	1.36	1.36
Wheat	14.10	14.50

	1991
	<i>million head</i>
Livestock numbers ²	
Cattle	
Beef	1.67
Dairy	2.76
Hogs	7.60
Poultry	127.23
Sheep and lambs	43.62
Turkeys ³	9.76

¹ Crop years are July-June.

² Based on latest livestock survey, June 1991.

³ As of Nov. 1991.

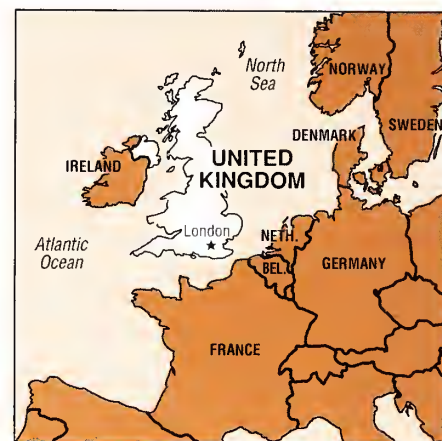
to agricultural production. May and June were cool and wet while the rest of the summer was unusually dry, providing favorable harvest conditions. In some parts of the country, the dry conditions led to a shortage of forage for livestock.

The 1991 UK grain harvest of 22.7 million metric tons was similar to harvest levels recorded in 1989 and 1990. Apart from dry conditions in some parts of England, the crops were harvested under favorable conditions. The area planted to milling wheat continued to decline in 1991. The emphasis on high-yielding feed wheats continued. Compound feed consumption increased only slightly in 1990/91, mostly because of increases in the sizes of the pig herd and poultry flock.

Dry conditions in 1991 reduced average sugar beet yields, but did not seem to affect total sugar production, which was up slightly from 1990, and well within the UK's sugar production quota set by the European Community's (EC) regime. The UK has been actively lobbying to retain its share of the EC sugar quota.

Flaxseed production nearly tripled 1990 output as EC support prices, more than double the world prices, encouraged dramatic area increases. Problems with the timing and difficulty of the crop's harvest in 1991 will probably discourage further large increases in area sown.

The beef herd continued its expansion in 1991, although at a slower rate than in 1990. The number of dairy cows, however, had fallen by 2 percent in June 1991 compared to the previous year. This drop was because of a 2-percent milk quota cut introduced across the EC in an effort to stem the rise in the production of dairy products. Sheep



United Kingdom at a Glance

Population: 57.5 million

Urban population: 87%

Population growth rate: 0.2%

Per capita income (1991): \$12,600

Land use: Crops 28%, meadows and pastures 48%, forest and woodland 9%, other 15%

Major crops: Wheat, barley, sugar beets, potatoes, rapeseed

Livestock sector: Beef and dairy cattle, sheep, hogs, poultry

Leading agricultural exports: Livestock and meats, barley, wheat

Leading agricultural imports: Fruits, vegetables, meat and meat preparations, beer, wine, cereals, dairy products, coffee, tea, cocoa

Agricultural imports as a share of total imports: 11%

U.S. share of total agricultural imports: 4%

Percent of labor force in agriculture: 2%

Membership in economic or trade organizations: EC, GATT, IBRD, IDA, IDB, IFAD, IFC, IMC, OECD

numbers were unchanged after almost a decade of consistent growth. Swine and poultry numbers rose during 1991 against a background of falling prices.

Beef, pork, and mutton production increased in 1991. Although domestic consumption of pork and mutton did not rise, the increases in production were

Value of Agricultural Imports, 1991

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Animal feed	1,150.1	11
Beer and wine	2,253.8	2
Fruits and vegetables	5,558.0	5
Meats and preparations	3,403.0	—
Oilseeds	414.3	33
Tobacco	865.0	9
All agricultural products ²	25,112.7	4

¹ Values are shown in U.S. dollars at U.S.\$1=0.53 pounds. Includes commercial and concessional imports.

² Includes products not listed. Excludes forest products.

offset by higher exports of pork and a decline in imports of mutton and lamb. Poultry production also rose in 1991, despite depressed market conditions.

The value of agricultural production in the UK fell slightly in 1991, while that of inputs rose by 2 percent. Not taking into account the depreciation of the industry's capital stock, these figures translate into a 3-percent fall in the UK's agricultural product. The decline in the value of agricultural production was mostly the result of a weakening of commodity prices in the UK, especially in the livestock sector. The beef sector was an exception where heavy intervention purchases held prices above the previous year's levels for most of 1991.

Total income from all types of farming activities fell by 6 percent in 1991 and the agricultural labor force fell by 2 percent. The total number of people engaged in agriculture in 1991

was 12 percent below its level in the early 1980's.

Incomes on cereal and dairy farms fell by 10 and 15 percent, respectively, in 1991, and are expected to fall further in 1992, mainly because of cuts in the milk quota. Hill and upland farms, on the other hand, fared well in 1991 as a result of large increases in sheep subsidies in the geographically disadvantaged areas of the UK.

Farm and food policy

The 1991 price fixing round of the EC Common Agricultural Policy (CAP) took place against an uncertain background of impending reform of the expensive European farm policy. The member states adopted budgetary ceilings that froze most agricultural commodity prices, and agreed to a 2-percent cut in milk quotas and an increase in the co-responsibility levy for cereals.

For the UK, however, the monetary agreement reached during the negotiations that fixed the exchange rates at which agricultural commodities are traded between member countries (green rates), effectively meant a devaluation of the UK's "green pound." As a result, prices in the UK for most commodities were increased by 2 percent.

At the national level, the issues of major concern relate to the environment and the future of the countryside. In 1991, the Government introduced new water quality standards, and stringent new anti-pollution legislation. The management agreements between the Government and farmers in environmentally sensitive areas are being reviewed and extended.

Trade trends

The UK is a net importer of food and feed. During the 1980's, it became a net exporter of cereals, but it remains a net importer of dairy products, bacon and ham, noncereal feeds, and tropical foods.

The value of UK agricultural exports and imports increased by 5 percent and 4 percent, respectively, in 1991. The EC supplies about two-thirds of the UK's food imports, especially of products which are subject to punitively high seasonal tariffs when imported from third countries. The EC also buys the bulk of British agricultural exports.

In 1991, the U.S. share of UK agricultural imports was 4 percent. The United States is a major supplier of animal feed (11 percent), oilseeds (33 percent), and tobacco (9 percent) to the UK. Imports of meat and meat products from the United States fell once again in 1991 as an EC-wide decision not to accept these products came into effect in October 1990. The U.S.-EC dispute that gave rise to the decision concerns meat inspection issues. In October 1991, the EC lifted its restrictions.

U.S. fruits, vegetables, dry fruits, nuts, and wines continue to make gains in the UK markets.

Trade policy and prospects

Although the Government has often expressed its commitment to liberalizing the restrictive CAP of the EC, it is committed to the policy for as long as it stands. This is also the case for the EC position in the multilateral trade negotiations being conducted under the auspices of the General Agreement on Tariffs and Trade (GATT), where the EC Commission negotiates on behalf of all EC members. Nevertheless, the UK remains an attractive market for U.S. agricultural high-value products. ■

Uruguay

Profile of agriculture

Uruguay's land area is a transition from the Argentine plains in the south to the Brazilian highlands in the north. Uruguay's climate is temperate, with warm, but not hot, summers and mild winters.

Agriculture maintains a leading role in the Uruguayan economy, accounting for 11 percent of the country's gross domestic product in 1991. The agricul-

tural sector employs about 13 percent of the working population.

Uruguay is a net exporter of agricultural products—mainly beef, wool, and rice—with an increasingly open economy and nearly 92 percent of its total area allocated to agricultural production.

The total number of farms has fallen 26 percent in the past 20 years. This trend is expected to continue.

As one of the four signatories of the MERCOSUR trade agreement (the others are Argentina, Brazil, and Paraguay), Uruguay expects to gain new trade opportunities for its commodities.

Although some areas of the country are adequate for grain production, Uruguay's climate and geography make it particularly well adapted for livestock production which accounts for 65 percent of total agricultural output. Ninety percent of the 16.6 million hectares of farmland is used for livestock production.

Production trends

Livestock production rebounded in 1990 after 2 years of severe drought. The cattle inventory decreased by nearly 20 percent during that period. The weak demand for beef in the international markets during 1991 contributed significantly to reducing the slaughter rate, and mild weather during most of the year helped to achieve high calving rates and an unusually large calf crop.

Wool production increased by nearly 15 percent during 1991 as a result of adequate herd management and good weather.

Production of wheat decreased by nearly 50 percent in 1991 because of excessive rainfall at planting time, which caused a significant reduction in area sown to wheat. Consequently, Uruguay will have to import more than 150,000 tons of wheat during 1992.



Uruguay at a Glance

Population (1991): 3.11 million

Urban population: 89%

Population growth rate: 0.5%

Per capita income (1990): \$2,656

Land use: Crops 8%, meadows and pastures 78%, forest and woodland 4%, other 10%

Major crops: Sugarcane, rice, wheat, barley, corn, sugar beets

Livestock sector: Sheep, beef and dairy cattle, horses, hogs, poultry

Leading agricultural exports: Beef and offals, wool, leather, rice, fish, citrus, dairy products, barley and malted barley

Leading agricultural imports (1990): Cotton, lumber, corn, seed potatoes, sunflowerseed oil, tobacco, sugar, livestock genetics

Agricultural imports as a share of total imports: 13%

U.S. share of total agricultural imports: 5%

Percent of labor force in agriculture: 13%

Membership in economic or trade organizations: CCC, FAO, GATT, IDB, IBRD, IMF, ISO (observer), LAFTA, LAIA, OAS, SELA, UNCTAD, WSG

Other winter crops did not have the same problem. Production of rice, for harvest during the first quarter of 1992, is expected to increase significantly because of an expected 20- or 30-percent expansion in the area planted. Corn production is also expected to increase while soybeans and sorghum will

Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production ¹		
Barley	133	158
Corn	124	140
Oats	51	56
Rice	517	610 ¹
Sorghum	90	70 ¹
Soybeans	40	20 ¹
Sugarcane	600	620
Sugar beets	142	120 ¹
Sunflowerseed	57	60 ¹
Wheat	416	208

	<i>thous. head</i>	
Livestock numbers		
Cattle	9,431	10,058
Beef	9,061	9,688
Dairy	370	375
Hogs	280	280
Horses	500	500
Poultry	²	²
Sheep	24,860	25,941

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	349	280
Eggs ³	470	480
Milk ⁴	1,030	1,055
Poultry ⁵	34	34
Wool	100	115

¹ Harvested in first quarter 1992.

² Not available.

³ Million eggs.

⁴ Million liters.

⁵ Liveweight.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Corn	4.1	55
Corn oil	0.4	0
Cotton	11.5	0
Livestock	0.1	40
Lumber	4.6	8
Seed potatoes	3.5	0
Semen, livestock	0.3	53
Sorghum	0.3	100
Sunflowerseed oil	3.3	0
Tobacco	0.9	0
All agricultural products²	137.0	5

¹ Values are shown in U.S. dollars at U.S.\$1=1,171 pesos.

² Includes products not listed.

decrease significantly. Sunflowerseeds are expected to maintain current levels of area and production, although the trend is to increase the use of hybrid seed and, consequently, the production of oil per hectare.

Uruguay is self-sufficient in sugar production and holds a share of the U.S. import quota. Uruguay has begun to reconsider its position as a sugar-producing country. Through protectionist import policies, Uruguay is able to produce sugar and support domestic prices at a level significantly higher than the cost of imported Brazilian sugar. With the signing of the MERCOSUR agreement, Uruguayan producers will face stiff competition from Brazilian producers.

In Uruguay, sugar is produced from both sugarcane and sugar beets. Production of sugarcane is located in the upper northwest, on an area of approximately 10,000 hectares. Sugar beets are grown in the west, but the area declined sharply from 13,000 hectares in 1981 to 3,757 hectares in 1990 because of technical and economic problems.

The dairy sector has gradually expanded during the past 25 years. Milk production, now about 1,050 million liters per year, has increased by approximately 2 to 2.5 percent a year. Uruguay hopes to continue to expand its dairy sector as it envisions significant Brazilian import demand and trade opportunities through the MERCOSUR agreement.

Farm and food policy

The Government is rapidly abandoning the concept of self-sufficiency in most foodstuffs, and is aggressively moving towards free-market policies. The MERCOSUR agreement requires the total elimination of import taxes among member countries.

Most probably, as a result of the competitiveness of Argentina and Brazil, Uruguay will have to focus production on specialty crops or specialized phases of production. As an example, Uruguay is now a complete-cycle cattle producing country. In the near future, Uruguay may concentrate its efforts on cattle breeding while the finishing of the steers may be done in Argentina. The reason for this change is that Argentina's rich soils produce better pastures than in Uruguay, thus reducing time needed to finish steers for market.

The Government is strongly promoting soft loans and tax credits for reforestation. Approximately 4 percent (670,000 hectares) of Uruguay's land area is forested. The Government plans to accelerate reforestation above the current 3,000 hectares per year. The goal is to achieve an increase of 200,000 hectares in a 5-year period.

The area under rice cultivation is

increasing rapidly as a result of large investments from Brazilian rice growers. This trend is expected to continue.

Trade trends

Uruguay is a net agricultural exporter. Agricultural exports in 1990 amounted to \$1.19 billion, and agricultural imports totaled \$170 million. Main agricultural exports that year were beef, wool and wool products, leather and leather apparel, fish, rice, dairy products, citrus, barley and barley malt, sugar, and soybeans. Main exports to the United States were beef, wool, sugar, and cheese. Main agricultural imports during 1990 were cotton, lumber, corn, seeds, potatoes, sunflowerseed oil, and tobacco, and from the United States, corn, lumber, sorghum, cattle semen, and sunflowerseed.

Trade policy and prospects

Uruguayan imports from MERCOSUR member countries are assessed a maximum import tax of 27 percent although most agricultural commodities pay zero tax. Imports from other countries are charged a maximum of 30 percent, but most agricultural products are charged minimal import duty. By 1995, the maximum import tax on products from MERCOSUR countries will not be assessed an import tax, while imports from other countries will be charged a maximum of 15 percent import tax. The MERCOSUR agreement stipulates that by 1995 the four countries will have a common maximum import tax on commodities originating in nonmember countries. This tax will be negotiated by the four member countries. ■

Profile of agriculture

Agriculture employs 13 percent of the country's labor force and accounts for about 6 percent of the gross domestic product. The average farm size is 80 hectares. A major economic reform program launched in 1989 is still being implemented. Trade has been liberalized and Government marketing monopolies and official prices are being abolished.

Agriculture is significant in the northern third of the country, where most of the crop production occurs. There, the dominant crops are white corn, sugar, sorghum, rice, oilseeds, and vegetables. Dairy and broiler production is also significant. The flat central third of the country is devoted to extensive cattle raising. Most of the southern third of the country consists of tropical forests and the lowlands of the Orinoco River, which supports little agricultural activity.

Agricultural Production

	1989	1990
	<i>thous. metric tons</i>	
Crop production		
Cereals	1,684	1,780
Coffee	73	76
Cocoa	14	16
Fruits	2,421	2,480
Oilseeds		
and textiles	326	290
Pulses	46	60
Roots and tubers	685	626
Sugarcane	7,809	6,902
Tobacco	14	15
Vegetables	330	400

Livestock numbers

	<i>mil. head</i>	
Broilers	204.1	234.1
Beef cattle	3.6	3.6
Dairy cattle	1.9	1.4
Hogs	1.5	1.4

Production trends

In 1990, agricultural output decreased by 1.3 percent, an improvement over 1989's drop of 6 percent. In contrast, the economy in general grew 4 percent. This general contraction for agriculture is consistent with the performance of the country's most important crops. Preliminary estimates for 1991 indicated little or no growth in agriculture, despite the Government's projections for a 6-percent growth rate.

In 1990/91, with improved weather, corn and sorghum production rose somewhat above their 1989/90 levels. Although interest rates dropped from 40 percent in 1989/90 to 33 percent in 1990/91, availability of farm credit still remains a problem.

Rice production rose again in 1990/91 for the third year in a row, stimulated by price increases, improved credit availability, and better rice research programs.

Wheat consumption is expected to decline now that new import taxes are being imposed on imported grains to protect more expensive local grains. Wheat millers have already raised their flour prices. Falling demand could trigger a drop in wheat production.

Coffee and cocoa production, which increased in 1990/91 thanks to good weather, is little affected by Government economic reforms. With little use of chemicals on these traditional crops, production costs are low. The Government has eliminated its monopoly on marketing these crops, and state organizations must now compete with private buyers. However, coffee and cocoa area is not expected to increase because of high interest rates and limited technical and financial assistance.

Sugar area and production decreased in 1990 because of high interest rates and higher planting costs. The Government has increased producer prices but yields continue to decline.

Recent Government policies to liberalize imports have seriously affected



Venezuela at a Glance

Population (1991): 19.2 million

Urban population: 89%

Population growth rate: 2.4%

Per capita income (1990): \$2,150

Land use: Crops 4%, meadows and pastures 20%, forest and woodland 39%, other 37%

Major crops: Corn, sorghum, rice, sugarcane, coffee, cocoa

Livestock sector: Poultry, beef and dairy cattle, hogs

Leading agricultural exports: Coffee, cocoa, cigarettes, plantains, mangoes

Leading agricultural imports: Wheat, feed grains, vegetable oils, soybean meal and cake, whole dry milk, barley malt, pulses

Agricultural imports as a share of total imports: 12%

U.S. share of total agricultural imports: 49%

Percent of labor force in agriculture: 13%

Membership in economic or trade organizations: ALADI, Andean Pact, FAO, GATT, ICO, OPEC, OAS, SELA

oilseed production, which dropped 40 percent in 1990. The sunflower crop, which suffered a 67-percent drop in area in 1990/91, was the most affected among oilseed crops. Cotton production was also hurt; new, more liberal import policies provided little protection from lower priced imports.

Sesame, traditionally the main oilseed in the country, suffered from poor weather and insect infestation. Palm oil

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Barley malt	43.9	1
Bovines, live	0.2	68
Corn	74.6	100
Milk, powdered whole	36.6	0
Pulses	25.2	40
Soybeans	13.4	92
Soybean meal and cake	91.1	91
Tallow	21.7	100
Vegetable oils	90.6	16
Wheat	168.2	67
Whiskey	37.4	0
All agricultural products ²	755.0	49

¹ Values are shown in U.S. dollars at U.S.\$1=53.00 bolivars.

² Includes products not listed above. Excludes forest products.

output is expected to increase since new plantations are beginning to produce. Dependency on imports of vegetable oils is now over 80 percent, with little prospect of new oilseed production in the country.

The economic shocks of 1989 worsened the situation in the swine industry, although demand for beef rose in 1990, as prices of grass fed cattle became more competitive than those of grain fed pork and poultry.

The impact of the new grain import tax policy to be implemented on feed grains in 1992 will increase the price of animal feed and further increase meat prices, affecting consumption accordingly. One of the most affected industries could be poultry.

Farm and food policy

Venezuela's agricultural finances have been streamlined, with the integration of the Government's financing

agencies, but credit and finance for agriculture are still expensive. In 1991, agricultural interest rates hovered around 35 percent.

Most inputs (pesticides, agrochemicals) are imported, and their prices continue to increase with the devaluation of the currency. Funding for technical assistance to farmers is scarce, and the situation is becoming more difficult. Traditional crops such as coffee, cocoa, corn, and sorghum continue to suffer from low or declining yields because of the inability of farmers to employ improved cultivation practices.

Trade trends

Imports of agricultural products have traditionally averaged over \$1 billion, but the severe recession and devaluation of the Venezuelan *bolivar* led to a decrease in agricultural imports to \$800 million in 1989, and \$755 million in 1990. In 1989, agricultural exports totaled approximately \$200 million, and in 1990 reached \$355 million.

Agricultural imports are composed mostly of feed grains, wheat, soybean meal, and vegetable oils. Venezuela imports 85 percent of its vegetable oil needs and 60 percent of its feed grain needs.

Exports of traditional items have increased but are very limited, consisting mostly of coffee, cocoa, and tropical fruits shipped to European markets. Exports of nontraditional items declined in 1991.

Because of its geographical proximity and long trade relationship, the United States has traditionally been Venezuela's largest single supplier, accounting for roughly 50 percent of all agricultural imports. Venezuela's integration into the Andean Pact and other groups, such as ALADI (Latin American Association of Integration), has reduced the U.S. share of the Venezuelan market, especially for vegetable oils.

Imports of agricultural products from the United States dropped from \$749 million in 1988 to \$464 million in 1989, and \$372 million in 1990. Imports from the United States are estimated to have increased to approximately \$400 million in 1991, reflecting some recovery in the Venezuelan economy.

Trade policy and prospects

In 1989, the Government began revising its international trade policy, dropping tariff levels considerably and eliminating import restrictions for all products except grains, oilseeds and related products, dairy products, and sugar. This process was sparked by the country's accession to the General Agreement on Tariffs and Trade (GATT) in September 1990.

The process of trade liberalization is scheduled to continue until 1993, with further reductions in tariff levels. Quantitative import restrictions on sensitive items are being replaced by a system of variable specific taxes (price band) to be levied on imports of food grains and vegetable oils to protect local producers from low prices of foreign competing products.

As of December 1991, this system had been applied to wheat and wheat products, but oilseeds and vegetable oils (with soybeans as an exception) were still under Government import licensing. The Government implemented this policy for feed grains in March 1992. Import licenses will still be required for feed grains until the purchase of the 1992 sorghum crop is guaranteed. Government officials have been meeting with the compound feed industry, grain producers, and farmers' organizations to work out a purchase mechanism and price level. Sugar and dairy products are expected to be placed under a similar procedure before the end of 1992. ■

Yugoslavia

Y

Profile of agriculture

Agriculture contributes about 12 percent to the Yugoslav gross national product and employs roughly 19 percent of the labor force. About one-half of agricultural production comes from Serbia and one-third from Croatia and Slovenia combined.

The private sector contributes about 60 percent to agricultural production.

Agricultural Production

	1990	1991 ¹
	<i>thous. metric tons</i>	
Crop production²		
Corn	6,724	10,500
Potatoes	2,186	2,400
Soybeans	157	180
Sugar beets	5,985	6,200
Sunflowerseed	418	500
Tobacco	46	54
Wheat	6,359	6,500

	<i>thous. head</i>	
Livestock numbers³		
Cattle	4,702	4,527
Hogs	7,231	7,358
Poultry	73,524	75,827
Sheep	7,596	7,431

	<i>thous. metric tons</i>	
Animal product output		
Beef and veal	352	320
Eggs ⁴	4,566	4,520
Milk		
Cow	4,500	4,400
Sheep	139	130
Mutton and lamb	67	65
Pork	799	720
Poultry	295	270

¹ Estimated.

² Crop years vary by commodity.

³ Estimates as of Jan. 15 each year.

⁴ Million eggs.

Private farmers hold 83 percent of the arable land and comprise over 90 percent of the agricultural labor force. The maximum allowable size of a private farm has increased from 10 to 30 hectares since 1988, but the average remains only about 3.3 hectares.

The socialized agricultural sector numbers over 3,200 agricultural firms, including those engaged in agricultural research, extension, and marketing services. A few of them are large, vertically integrated conglomerates, known as kombinats. In 1989, the Government enacted legislation to permit privatization of all of Yugoslavia's socialized agricultural and other enterprises. This process has been slowed by local Government inaction.

The socialized agricultural sector is mainly involved in the large-scale mechanized production of grains, oilseeds, sugar beets, hogs, and poultry. Production of labor-intensive crops is left to the small private farmers.

Production trends

Yugoslavia's agricultural production fluctuated widely during the 1980's because of variable weather conditions and volatile Government pricing policies. Summer droughts in 1987, 1988, and 1990 hurt crop production. Thanks to extremely favorable weather, production rebounded by about 4 percent in 1991, even as planted area declined. Crop yields in 1991 were up considerably despite lower use of fertilizer and pesticides, and losses due to the civil war.

The summer droughts caused significant production declines of nearly all major crops (corn, sugar beets, soybeans, and tobacco) except wheat.

The livestock sector was especially hurt during this period of reduced feed production when supply-driven feed prices surged and domestic demand for meat declined as the result of a drop in consumer purchasing power. During the 1984 to 1991 period, cattle and hog



Yugoslavia at a Glance

Population (1991): 23.5 million

Urban population: 47%

Population growth rate: 0.45%

Per capita income (1991): \$4,170

Land use: Crops 31%, meadows and pastures 25%, forest and woodland 36%, other 8%

Major crops: Corn, wheat, sugar beets, sunflowerseed, soybeans, fruits, tobacco

Livestock sector: Hogs, poultry, cattle, sheep, horses

Leading agricultural exports: Live animals and livestock products, fruits, vegetables, wine, tobacco

Leading agricultural imports: Meat and meat products, tropical fruits, cotton, corn, coffee, hides and skins, soybean meal and soybeans, tobacco, cigarettes

Agricultural imports as a share of total imports: 15%

U.S. share of total agricultural imports: 8%

Percent of labor force in agriculture: 19%

Membership in economic trade organizations: FAO, GATT, IBRD, IDA, IMF, UNCTAD

numbers declined by 16 and 20 percent, respectively. Sheep numbers, stimulated by increased export earnings, rose steadily until 1988, but this trend has been reversed in the past 3 years. Poultry numbers also increased in the 1980's but declined in 1990 and 1991.

Value of Agricultural Imports, 1990

	Total imports \$ mil. ¹	U.S. share %
Selected products		
Coffee	150	0
Corn	150	67
Cotton	166	7
Hides and skins	107	9
Meat and meat products	320	1
Soybean meal	82	11
Soybeans	49	65
Tobacco	34	32
Tropical fruits	176	0
All agricultural products²	2,785	8

¹ Values are shown in U.S. dollars at U.S.\$1=11,275 dinars.

² Includes products not listed above.

The outlook for Yugoslavia's agricultural sector is generally negative because of the disruptions caused by the civil war.

Farm and food policy

Once prominent, the role of the Government in supporting agricultural production was greatly reduced by 1991 when only two sector-oriented programs were operable—the minimum producer support price system, and the subsidized agricultural credit system.

Minimum producer prices continued to be in effect for wheat, corn, sunflowerseed, sugar beets, and fattened livestock (cattle, hogs, and sheep).

Subsidized loans were available to agricultural processors for purchasing of necessary raw materials, but not to private farmers.

Federal programs to subsidize exports and farm inputs (fertilizers, pesticides, and seeds) were abandoned in 1991 because the Government was unable to fund them.

Trade trends

Yugoslavia is a net agricultural importer. The agricultural trade deficit ranged from \$10 million in 1982 to \$1.56 billion in 1990 (except for a small surplus in 1984). Tropical fruits, cotton, coffee, hides and skins, soybeans, and soybean meal were the main commodities imported. However, in 1989 and 1990, the country imported large amounts of meat and meat products. Record 1990 agricultural imports of \$2.78 billion (compared to \$1.68 billion in 1989) were the result of an overvalued domestic currency, greater availability of foreign exchange, a liberalized import policy, and drought-related domestic production shortfalls. The Government's goals were to use imports to hold down domestic food prices and to exert competitive pressure on the monopolistic processing sector.

Agricultural imports are estimated to have declined by 10-15 percent in 1991. A severe shortage of foreign exchange and improved domestic crop production were the primary reasons for the decline.

Preliminary estimates show that Yugoslav agricultural imports from the United States declined considerably in 1991 because of a lack of foreign exchange. Until 1991, imports of certain U.S. products were aided by USDA's export credit guarantees. However, the 1991 program was suspended in mid-year when the Yugoslav banks were unable to meet the loan repayment schedules.

Agricultural exports in 1991 are estimated to have increased by about 10 percent over the 1990 level of \$1.21 billion because of the expanded availabilities and sales of wheat, corn, fruits, sugar, and tobacco. However, exports of livestock and livestock products declined

by about 25 percent in 1991 mostly because of war-related disruptions in the domestic transportation system.

Trade policy and prospects

A severe foreign currency shortage is currently the most important barrier to imports, and various types of counter-trade arrangements are being increasingly used. War-related obstacles to trade include the disruption of the transportation system within Yugoslavia and the closure of many deep water ports.

Despite significant trade liberalization undertaken by the Government in the past 2 years, various tariff and nontariff restrictions remain.

About 90 percent of all agricultural imports enter without any quantitative restrictions, but are subject to import duties and fees of between 15 and 30 percent. A number of major agricultural and food commodities (livestock, meat, milk, wheat, wheat flour, corn, and oilseeds) are additionally protected by border charges, quotas, and import surcharges.

Federal authorities are losing control of trade policy as Yugoslavia breaks up into independent states. As civil conflicts escalated in 1990 and 1991, inter-republican trade barriers were erected by the various republics, mainly in the form of border taxes. Trade between Croatia and Slovenia has almost stopped. Additionally, in December 1991, Serbia adopted regulations which virtually prohibit imports and exports of agricultural products without Government permission. These regulations are aimed at ensuring sufficient domestic food supplies. ■

Zimbabwe

Z

Profile of agriculture

Agriculture is the backbone of the Zimbabwean economy. Zimbabwe has relative economic and political stability and normally a high degree of food self-reliance. It is a middle-income country, with agriculture accounting for about 15 percent of gross domestic product.

Zimbabwe has a small, modern, commercial agricultural sector with large mechanized farms, using substantial amounts of unskilled labor. These farms produce most of the commercial crops. A large communal agricultural sector also exists which produces crops primarily for personal needs, has little or no mechanization, and relies on household manual labor.

The most important agricultural commodities produced are corn, tobacco, beef, milk, wheat, cotton, soybeans, sugar, and peanuts. White corn is the most important food crop.

Agricultural Production

	1989/90	1990/91
	thous. metric tons	
Crop production		
Coffee	14	10
Corn	1,980	1,596
Cotton lint	67	94
Cotton, seed	188	205
Peanuts	95	94
Sorghum	82	72
Sugar	502	492
Sunflowerseed	64	68
Tobacco	120	153
Wheat	326	265

	1990
	mil. head
Livestock numbers¹	
Beef cattle	5.60
Dairy cows	0.11
Hogs	0.25
Poultry	25.00
Sheep	0.58

¹ Estimates as of July 1.

Varied ecological conditions allow Zimbabwe to grow a wide variety of crops. However, about three-quarters of this landlocked country is dry—particularly the southern and western areas—and best suited to pastoral operations which often combine cattle and game farming. Cattle provide draft power as well as meat in the communal sector. Irrigation is fairly well developed for growing winter wheat and for supplementing rain-fed crops and it is essential for the sugar crops in the dry southeast.

Production trends

The country is suffering the effects of a major drought that began in the spring of 1991. Most crop and livestock production for 1991/92 will be substantially reduced, requiring major imports during 1992/93 of corn, vegetable oils, and even sugar. Production in 1990/91 was mixed, with food crops below normal because of lower rainfall and reduced plantings. The exception was the tobacco crop, which was at a record level and of excellent quality, and record prices were received at auction for tobacco products.

Horticulture is one of the fastest growing sectors of Zimbabwe's agricultural industry as producers have worked hard to develop export markets. Europe has developed into a good market for flowers and some vegetables. Vegetables are also exported to the Far East and South Africa. Citrus producers, particularly those on the southern borders of Zimbabwe, have a marketing arrangement with the South African Citrus Exchange. Zimbabwe has an advantage in that its citrus is ready for market a month ahead of South Africa's and, therefore, serves to complement South African sales rather than to compete with them. The two major constraints to further expansion of the horticultural sector are the shortage of air transport and cold storage facilities.

Because of the dry summer of 1991/92, producers are expected to



Zimbabwe at a Glance

Population (1991): 10.7 million

Population growth rate: 2.9%

Per capita income (1990): \$540

Land use: Crops 7%, meadows and pastures 12%, forest and woodland 62%, other 19%

Major crops: Corn, sugar, wheat, cotton, tobacco, soybeans, sorghum, sunflowerseed, tea

Livestock sector: Beef and dairy cattle, sheep, hogs,

Leading agricultural exports: Tobacco, cotton, meat, sugar

Leading agricultural imports: Wheat
Agricultural imports as a share of total imports: Negligible

U.S. share of total agricultural imports: Negligible

Percent of labor force in agriculture: 74%

Membership in economic or trade organizations: ACP, AFDB, FAO, GATT, IBRD, IDA, IFAD, IMF

slaughter more cattle and sheep than normal in order to conserve grazing pastures. Meat exports to the European Community (EC) were interrupted as the result of foot-and-mouth disease outbreaks in 1989 and 1991.

The current drought is expected to take a heavy toll on communal cattle as these areas have very little reserve of feed. Some authorities consider that during 1992, up to a million head of communal cattle could die. It is generally expected that beef will be in short supply in Zimbabwe for the next 2 to 3 years.

Milk production declined during 1990 and 1991 because of poor returns to producers. The Government has increased prices to encourage increased production, as supplies are below domestic needs.

Farm and food policy

The Government recently modified its agricultural policy. The main objectives are to improve living standards of farm families, particularly in communal and resettlement areas, to increase food security, to increase rural employment, and to provide inputs for the processing sector. The Government also wants to increase the number of black farm owners and has proposed legislation to acquire 5 million hectares on which to relocate black farmers.

The Government hopes to raise the agricultural growth rate to 3.2 percent per annum. It has announced higher prices, some substantially, for the controlled basic food crops (cereals, oilseeds, beef, and milk), and will allow producers and processors to negotiate price levels for previously controlled cotton. The Government is expected to deregulate other nonfood crops such as oilseeds. Corn sales were deregulated in the dry southern areas.

The Grain, Cotton, and Dairy Marketing Boards and the Cold Storage Commission (beef) control the marketing and trading of their respective commodities. The Grain Marketing Board also oversees capital improvement for bulk handling and storage facilities. The Government has permitted increased private trading activities for some of the marketing boards, and plans further privatization.

In the past, substantial subsidies had been required for corn, beef, and dairy products, but higher prices to producers and reduced production have changed this policy. The Government maintains some food subsidies to implement its policy of keeping consumer prices low.

Large-scale commercial farmers

obtain most of their financing from commercial banks, while small farmers use the Government's Agricultural Finance Corporation. The drought and low producer prices have increased the borrowing by commercial farmers substantially in recent years.

Farm equipment is a serious problem. Tractors, combines, pickup trucks, and motorbikes all are in short supply. Spare parts for farm machinery are becoming increasingly difficult to obtain because of the reductions in foreign currency allocations, the depreciating Zimbabwe *dollar*, and the age of the tractor fleet.

The Government has established several foreign exchange accounts to assist suppliers of agricultural inputs, and agricultural exporters of such major export earners as horticultural crops and tobacco.

Retail marketing channels vary, with supermarkets offering most items in the urban centers and small stores and market stalls operating in the rural areas.

Trade trends

Due to foreign exchange constraints, regular agricultural imports are minimal with the exception of wheat, which usually comes from Zambia. However, with the 1991/92 drought and reduced domestic production, corn, sugar, rice, and vegetable oils were imported and more will be needed during 1992/93. Because of limited foreign exchange, some of these supplies will be sought under donation and long-term financing programs.

Cereal production had grown in recent years, but annual population growth of over 3 percent has caused per capita cereal production to decline almost 2 percent per year. The current reduced production will require additional dependence on imports.

A substantial increase in agricultural exports of noncontrolled agricultural products such as horticultural items (citrus, flowers, and fruits) and tobacco, as well as wild game, occurred in 1991.

The decision by the Government to liberalize trade for several nonfood crops such as cotton is expected to result in increased production and exports in the coming years.

Export earnings during 1991 were expected to decrease following the reduced crops of 1990/91, except for tobacco where earnings have soared. Additional complications have been the interruptions in other sections of the transport system as the result of the inability to maintain freight cars.

The United Kingdom, Germany, and South Africa together take about one-third of Zimbabwe's exports. South Africa has the advantage of proximity and, with the political changes taking place there, could revert to being the major destination of exports.

Trade policy and prospects

The Government limits imports to needed items. Zimbabwe's greatest barrier to imports is its acute shortage of foreign currency. It is allowing the Zimbabwe *dollar* to devalue against international currencies in order to help the competitiveness of its products on world markets.

Zimbabwe has various nontariff barriers to trade. All imported agricultural products are subject to licensing requirements and special import permits. Although Zimbabwe does not have a year-round quota system, it restricts certain agricultural products on a seasonal basis. The Government has recently required shipments to be inspected at point of export to certify that the shipment is what has been ordered and approved for import. The Government is not expected to make major changes in these policies except to allow imports which can be used to increase local production and exports, such as seeds and animal genetics. ■

Former USSR

ARMENIA

Armenia borders Turkey, Iran, Georgia, and Azerbaijan. Tension between Armenia and Azerbaijan continues to escalate and has resulted in severe shortages of natural gas, food, and other agricultural inputs.

Most of Armenia's agricultural production is centered in the Ararat Valley where nearly 80 percent of the arable land exists. Nearly all the arable land is irrigated. One of Armenia's major environmental problems is the increase in soil salinity in the Ararat Valley. Annual yields are reported to have fallen 30 percent in affected areas which total over 20,000 hectares.

Armenia is not self-sufficient in most agricultural products. It imports approximately 1.3 million metric tons of grains annually to supplement domestic production. Of this total, 500,000 metric tons are wheat, and the remainder corn



Armenia at a Glance

Population (1991): 3.4 million

Urban population: 68%

Population growth rate (1979-89): 0.8%

Land use: Crops 13%

Major crops: Vegetables, grains, fruits, potatoes

Livestock sector: Goats, sheep, cattle, swine

or barley. All high-protein animal feed supplements must be imported. More than half of Armenia's imports of dairy products are in the form of non-fat powdered milk. Armenia has traditionally been an exporter of fresh fruits and vegetables, wines, and cognac.

Armenia has no agricultural chemical or fertilizer production plants and must rely totally on imports. Shortfalls in needed grain and agricultural chemical imports could severely affect already low agricultural production.

In 1991, Armenia became the first republic of the former Soviet Union to privatize roughly 80 percent of its agricultural lands. Approximately 150,000 - 170,000 individual private farms and 10,000 farmer cooperatives have been organized.

No comparable legislation has been introduced to provide for privatization and commercialization of the agribusiness sector. The Government still provides almost all agricultural inputs, and still carries out all food processing, food storage, and food distribution and marketing activities.

In April 1992, the World Bank and the International Monetary Fund

offered membership to Armenia. Membership in these organizations could pave the way to wide-scale international economic assistance. ■

AZERBAIJAN

Azerbaijan is located in the south-eastern part of the Transcaucasus, on the Caspian Sea. The climate is varied, ranging from subtropical conditions to mountainous. Almost half of Azerbaijan is plains. Azerbaijan's greatest resource is oil, which provides much of the country's hard currency earnings.

The crop regions are arid and require irrigation. Cotton is a leading crop, but it is somewhat less important as a hard currency resource than in several other cotton-producing countries of the former Soviet Union. In addition to cotton, Azerbaijan also produces a large

Azerbaijan Agricultural Production

Armenia Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Fruits and berries	156	120
Grains	254	340
Wheat	156	130
Grapes	144	200
Potatoes	213	316
Vegetables	390	457

	<i>mil. head</i>	
Livestock numbers ¹		
Cattle	0.6	0.5
Goats and sheep	1.2	1.1
Hogs	0.3	0.3

	<i>thous. metric tons</i>	
Animal product output		
Eggs ²	518	476
Meat	93	89
Milk	432	403

¹ As of December 31.

² Million eggs.

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Cotton	543	500
Fruits and berries	319	N/A
Grains	1,400	1,300
Wheat	880	750
Potatoes	185	180
Vegetables	856	839

	<i>mil. head</i>	
Livestock numbers ¹		
Cattle	1.8	1.7
Goats and sheep	5.4	5.2
Hogs	0.2	0.2
Poultry	29.1	27.6

	<i>thous. metric tons</i>	
Animal product output		
Eggs ²	1,100	N/A
Meat	176	162
Milk	970	900

¹ As of December 31.

² Million eggs.



Azerbaijan at a Glance

Population (1991): 7.1 million

Urban population: 54%

Population growth rate (1979-89): 1.5%

Land use: Crops 16%

Major crops: Grains, vegetables, cotton, potatoes

Livestock sector: Goats, sheep, cattle

quantity of grapes, and is the third largest producer of tea after Georgia and Russia. Fruits and vegetables from Azerbaijan can often be seen in the markets of Moscow.

Azerbaijan is a net importer of grains and livestock products, which it traditionally has purchased from other former Soviet republics.

The World Bank and the International Monetary Fund did not offer membership to Azerbaijan in April 1992 but are expected to do so at a later date. ■

BYELARUS

Byelarus, located in the northern part of Eastern Europe, shares borders with Ukraine, Russia, Lithuania, Latvia, and Poland. Forests cover more than one-third of its total area, and it is sprinkled with many lakes. The typical terrain is marshy and hilly.

Seventy percent of the radiation from the 1986 Chernobyl nuclear reactor explosion fell on Byelarus' territory. This fallout has significantly restricted production of certain foods in some areas. Currently, food exported from Byelarus is claimed to be tested for radiation.

Byelarus retains either third or fourth place in production of most agricultural commodities, as a share of the former USSR total. It produces nearly 15 percent of all potatoes and is an important producer of hogs, poultry, and milk.

Some of the production and distribution problems now facing Byelarus are



Byelarus at a Glance

Population (1991): 10.3 million

Urban population: 65%

Population growth rate (1979-89): 0.7%

Land use: Crops 3%

Major crops: Potatoes, grains, vegetables

Livestock sector: Cattle, hogs, goats, sheep

consistent with the problems and inefficiencies of the other countries of the former Soviet Union (i.e., lack of inputs, spare parts, storage capacity). Inflation, high interest rates, no system of exchange rates, and lack of equity investment structures all dampen development.

Byelarus is strongly interested in continuing inter-republic trading, because it is highly dependent on imports of raw materials. Nearly two-thirds of the imports used by industry in Byelarus come from Russia, and total imports from all republics make up 80 percent of Byelarus' imports. At world prices for imports, especially energy imports, Byelarus would face a large trade deficit. In 1992, Byelarus expects to have a 2.5-billion-ruble deficit with Russia alone.

In April 1992, the World Bank and the International Monetary Fund offered membership to Byelarus. Membership in these organizations could pave the way to wide-scale international economic assistance. ■

Byelarus Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Fruits and berries	0.4	0.3
Grains	7.0	6.3
Wheat	0.4	0.3
Potatoes	8.6	8.9
Vegetables	0.7	0.7
	<i>mil. head</i>	
Livestock numbers¹		
Cattle	7.0	6.5
Goats and sheep	0.4	0.3
Swine	5.1	4.6
	<i>mil. metric tons</i>	
Animal product output		
Eggs ²	3.7	3.5
Meat	1.2	1.1
Milk	7.5	6.9

¹ As of December 31.

² Million eggs.

GEORGIA

One of the smallest of the former Soviet states, Georgia sits on the southeast shores of the Black Sea and is flanked by Armenia on the south, Azerbaijan on the east, and Russia on the north. Among former Soviet republics, Georgia ranks seventh in population and tenth in land area.

At present, 50 percent of Georgia's labor force is employed in the agricultural sector, but production is estimated to be just 80 percent of the 1989 level. Economic reformers in Georgia are anxious to bring employment in agriculture more in line with that in industrialized countries, which is around 10 to 15 percent. In the short term, they envision cutting agricultural sector employment by one-half.

Georgia Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Fruits and berries	591	426
Grains	700	500
Wheat	258	230
Grapes	691	574
Potatoes	294	300
Tea	516	520
Vegetables	443	434

	<i>mil. head</i>	
Livestock numbers ¹		
Cattle	1.3	1.2
Goats and sheep	1.6	1.4
Hogs	0.9	0.8

	<i>thous. metric tons</i>	
Animal product output		
Eggs ²	769	746
Meat	170	158
Milk	724	620

¹ As of December 31.

² Million eggs.



Georgia at a Glance

Population (1991): 5.5 million

Urban population: 56%

Population growth rate (1979-89): 0.8%

Land use: Crops 10%

Major crops: Grapes, tea, grains, vegetables, fruits and berries, potatoes

Livestock sector: Cattle, goats, sheep, hogs

Privatization of agriculture is proceeding rapidly, and the so-called "decollectivization" of huge state farms is nearly 60 percent complete, with free land having been given to farmers. Plots of land are first allocated, then land-holders will be given the opportunity to sell, lease, buy or continue to farm their allocated acreage. The yield from small, private plots under the communist system was far greater than the state farms; 6 percent of the agricultural land produced almost half of the output. Reformers hope that as ownership of land becomes more common, production from this private land will increase even further, but it is suffering from lack of inputs during this difficult transition period.

Georgia has a highly developed fruit and vegetable industry, but other types of farming and livestock production are less advanced. Georgia was the leading producer of tea in the former Soviet Union. During the Soviet era, Georgia was a major exporter of still and sparkling wines, as well as fresh and processed fruits and vegetables.

Georgia's substantial fruit and

vegetable production remains sufficient for domestic needs and some exports. Consumers, as in the other former Soviet republics, are being hit by higher free-market prices. Georgia will likely need to import meat, milk, and sugar, as traditional suppliers (Russia and Ukraine) either hold agricultural production for their own consumption, or seek exports for much-needed hard currency.

In April 1992, the World Bank and the International Monetary Fund offered membership to Georgia. Membership in these organizations could pave the way to wide-scale international economic assistance. ■

KAZAKHSTAN

Kazakhstan is situated in both Europe and Asia. Its topography varies

Kazakhstan Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Cotton	0.3	0.3
Grains	28.5	11.9
Wheat	16.2	7.9
Potatoes	2.3	2.2
Sugar beets	1.1	0.7
Sunflowerseeds	141.0	110.0

	<i>mil. head</i>	
Livestock numbers ¹		
Cattle	9.8	9.2
Dairy	3.4	3.3
Goats and sheep	35.7	33.2
Hogs	3.2	2.8

	<i>mil. metric tons</i>	
Animal product output		
Eggs ²	4,185.0	4,059.0
Meat	1.5	1.6
Milk	5.6	5.5

¹ As of December 31.

² Million eggs.



Kazakhstan at a Glance

Population (1991): 16.8 million

Urban population: 57%

Population growth rate (1979-89): 1.2%

Land use: Crops 13%

Major crops: Grains, potatoes, cotton, sugar beets, sunflowerseeds

Livestock sector: Goats, sheep, cattle, hogs

considerably from mountainous to desert. Most of the country is arid to semi-arid. Northern Kazakhstan is primarily plains and was the site of the virgin land settlement program. Land formerly inhabited by pastoral nomads was plowed and sown with grain crops. Central and southern Kazakhstan are desert. Irrigated agriculture is practiced in the south along the Syr Darya River and in the mountain foothills.

Kazakhstan is the least densely populated of the countries of the former Soviet Union, but people from over 100 different cultures have settled there.

Wheat is the major crop in Kazakhstan, accounting for well over half of all grain production. However, as a result of the lack of moisture in the region, grain yields in Kazakhstan are much lower and more variable than grain yields in European Russia or Ukraine. Wheat is produced in the so-called virgin lands of the north and western Kazakhstan. The agriculture of southern Kazakhstan more closely resembles that in other parts of Central Asia, with production of cotton, rice, and fruits. Kazakhstan has large sheep and goat herds and is a traditional

producer of karakul fleece. Kazakhstan is also a large producer of meat.

Most of the farms in Kazakhstan are state-run; on average they are much larger than farms in European Russia. In the northern grain belt, farms average from 80,000 to 100,000 hectares each.

Kazakhstan generally is a surplus producer of wheat. In recent years, Kazakhstan has entered into barter arrangements with other former republics to import needed building materials and other deficit products in exchange for grain.

In April 1992, the World Bank and the International Monetary Fund offered membership to Kazakhstan. Membership in these organizations could pave the way to wide-scale international economic assistance. ■

Kyrgyzstan Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Cotton	81	N/A
Fruits and berries	100	N/A
Grains	1,500	1,300
Wheat	482	400
Rice	1	1
Grapes	100	N/A
Potatoes	400	N/A
Vegetables	500	N/A

Livestock numbers ¹

	<i>mil. head</i>	
Cattle	1.2	1.1
Goats and sheep	9.9	9.0
Swine	0.4	0.3

Animal product output

	<i>thous. metric tons</i>	
Eggs ²	0.7	N/A
Meat	200.0	240.0
Milk	1,200.0	1,100.0

¹ As of December 31.

² Billion eggs.



Kyrgyzstan at a Glance

Population (1991): 4.4 million

Urban population: 38%

Population growth rate (1979-89): 2.0%

Land use: Crops 7%

Major crops: Grains, vegetables, potatoes, fruits, cotton

Livestock sector: Goats, sheep, cattle

KYRGYZSTAN

Kyrgyzstan, about the size of South Dakota, is one of the least known of the new countries to emerge from the dissolution of the Soviet Union.

The climate of Kyrgyzstan is varied as a result of the extreme topographical conditions that range from subtropical to mountainous regions. The major crop regions in the country are located in the Chu and Fergana Valleys. Like other areas of Central Asia, temperatures range from extreme lows during winter months to high temperatures during the summer.

Kyrgyzstan's major crops include cotton, tobacco, vegetables, and fruits. It is also a large producer of wool (39,000 metric tons in 1990). Kyrgyzstan is not self-sufficient in most agricultural products, including feed and food grains and dairy products.

Medium-staple cotton is a major crop, but compared with other countries of Central Asia, exports are somewhat less important, both to earn hard currency and to obtain raw materials and other products from the former Soviet republics.

In April 1992, the World Bank and the International Monetary Fund offered membership to Kyrgyzstan. Membership in these organizations could pave the way to wide-scale international economic assistance. ■

MOLDOVA

Moldova is located in the southwestern region of the former Soviet Union. Most of the area of Moldova was acquired by the Soviet Union from Romania in 1940. Despite its small size, Moldova is the third largest producer of sunflowerseed among the countries of the former Soviet Union. It has also been long known for its wine and tobacco production.

In addition to grapes and sunflowers, Moldova produces relatively large amounts of grain and sugar beets. Corn



Moldova at a Glance

Population (1991): 4.4 million

Urban population: 47%

Population growth rate (1979-89): 1.0%

Land use: Crops 50%

Major crops: Grains, sugar beets, fruits, vegetables, potatoes, sunflowerseeds

Livestock sector: Hogs, goats, sheep, cattle

is the leading grain. Like Ukraine and Russia, Moldova's sugar refining industry is antiquated.

The United States has a trade agreement with Moldova which provides for reciprocal most-favored-nation (MFN) tariff treatment for the products of each country. The agreement permits Moldovans to export goods to the United States while receiving non-discriminatory treatment of their goods. The United States expects that this agreement will create commercial opportunities for emerging Moldovan enterprises and promote the development of a market-based economy in Moldova. At the same time, the agreement also provides for improved market access and non-discriminatory treatment for U.S. goods and services in Moldova and the step-by-step provision of national treatment for U.S. products and services.

In April 1992, the World Bank and the International Monetary Fund offered membership to Moldova. Membership in these organizations could pave the way to wide-scale international economic assistance. ■

Moldova Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Fruits and berries	901	646
Grains	2,500	3,200
Wheat	1,129	1,000
Grapes	940	780
Potatoes	295	300
Sugar beets	2,400	2,300
Sunflowerseed	252	170
Vegetables	1,177	1,153

	<i>mil. head</i>	
Livestock numbers ¹		
Cattle	1.1	1.0
Goats and sheep	1.3	1.1
Swine	1.8	1.6

	<i>thous. metric tons</i>	
Animal product output		
Eggs ²	1,129	1,095
Meat	366	303
Milk	1,512	1,300

¹ As of December 31.

² Million eggs.

RUSSIAN FEDERATION

The Russian Federation (Russia) spans Europe and Asia, with the large plains of the European section being interrupted by the Ural Mountain chain, generally accepted as the delineation between Europe and Asia.

Russia is the largest of the former Soviet republics, stretching from the Baltic Sea to the Pacific Ocean, and from north of the Arctic Circle down to the Black and Caspian Seas. With an ethnically diverse population of nearly 150 million, Russia accounts for a little more than half of the population of the former USSR.

Russia is a major producer of small grains (wheat, barley, rye, buckwheat), sugar beets, sunflowerseed, flax, potatoes, vegetables, and fruits.

Russian Federation Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Fruits and berries	2.4	1.7
Grains	116.7	89.1
Wheat	49.6	38.0
Grapes	0.6	0.5
Potatoes	30.8	34.1
Sunflowerseed	3.4	2.9
Sugar beets	31.1	24.4
Vegetables	10.3	10.1

	<i>mil. head</i>	
Livestock numbers ¹		
Cattle	57.0	53.0
Goats and sheep	58.2	52.4
Hogs	38.3	33.7

	<i>mil. metric tons</i>	
Animal product output		
Eggs ²	47.5	46.0
Meat	10.1	9.3
Milk	55.7	52.1

¹ As of December 31.

² Million eggs.



Russian Federation at a Glance

Population (1991): 148.5 million
Urban population: 74%
Population growth rate (1979-89): 0.7%
Land use: Crops 7%
Major crops: Small grains (wheat, rye, barley, buckwheat), potatoes, sugar beets, vegetables
Livestock sector: Cattle, goats, sheep, hogs

Production of corn and soybeans is not highly developed and is hampered by the relatively far northern location of the Russian growing areas. Russia is a significant grain importer, because of its insufficient output of both feed grains and wheat, combined with its inefficient internal grain marketing, processing, and distribution network.

Private farmers continue to face difficulties in obtaining most farm inputs. Crops from private holdings will probably be limited to garden production (fruits, berries, vegetables, potatoes) in the near term. Agricultural production suffered in 1991 because of weather-related problems, and political and economic confusion beyond the farmgate related to the dissolution of the USSR. With the continuation of economic uncertainties, the outlook for crop production in 1992 is not especially favorable, although improvement is expected over the poor 1991 results. Many of the usual problems—notably shortages of input supplies—continue to hamper producers.

The livestock sector continued to deteriorate in 1991, and livestock numbers are expected to continue to

dwindle, as feed availabilities shrink.

Marketing has been affected by the breakdown in distribution of goods from producing zones located in one newly independent state to processing and marketing areas situated in a different former Soviet state. For example, Russian cotton mills have stopped for lack of cotton from Uzbekistan.

Russia and 10 other former Soviet republics (excluding Ukraine which has a separate agreement with the U.S. Government) have agreed to cooperate to purchase agricultural commodities jointly in 1992 in the framework of the U.S. export credit guarantee program.

In April 1992, the World Bank and the International Monetary Fund accepted Russia's application for membership. This could pave the way for wide-scale international economic assistance.

Tajikistan Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Cotton	842	800
Grapes	1,189	157
Grains	300	300
Wheat	134	120
Potatoes	207	200
Vegetables	528	517

Livestock numbers ¹

	<i>mil. head</i>	
Cattle	1.4	1.3
Goats and sheep	3.3	3.1
Hogs	0.2	0.2

Animal product output

	<i>thous. metric tons</i>	
Eggs ²	592	N/A
Meat	108	87
Milk	575	600

¹ As of December 31.

² Million eggs.



Tajikistan at a Glance

Population (1991): 5.4 million
Urban population: 33%
Population growth rate (1979-89): 3%
Land use: Crops 9%
Major crops: Grapes, cotton, vegetables, grains
Livestock sector: Goats, sheep, cattle

TAJIKISTAN

Tajikistan is located in the southeastern section of Central Asia bordering China and Afghanistan. Unlike the other Central Asian countries, the Tajik language is related to Persian rather than Turkish. Tajiks represent over 60 percent of the population.

Most of Tajikistan is occupied by the high and remote Pamir Mountains, with farming conducted between its ranges. Cotton, sheep breeding, and vegetable production are the most important agricultural activities. A large share of Tajikistan's cotton is of the long-staple variety. Tajikistan is not self-sufficient in most agricultural products, especially food and feed grains.

In April 1992, the World Bank and the International Monetary Fund offered membership to Tajikistan. Membership in these organizations could pave the way to wide-scale international economic assistance. ■

TURKMENISTAN

Turkmenistan is situated in the southwestern part of Central Asia bordering Afghanistan and Iran to the south. More than four-fifths of its total area is desert. The majority of its population resides in rural areas and speaks a Turkish dialect.

Over 1.2 million hectares of land are irrigated. Cotton is the primary cash crop and Turkmenistan is the second largest cotton producer among the republics of the former Soviet Union. It produces almost a third of all the long-staple cotton in that region. Poor irrigation practices and the repeated planting of cotton year after year have reportedly caused serious ecological problems similar to those in other large cotton producing countries of Central Asia.

Turkmenistan Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Cotton	1,457	N/A
Fruits and berries	47	N/A
Grains	400	500
Grapes	169	140
Rice	42	N/A
Vegetables	411	N/A

	<i>mil. head</i>	
Livestock numbers ¹		
Cattle	0.8	0.8
Goats and sheep	5.5	5.5
Hogs	0.3	0.3
Poultry	19.0	N/A

	<i>thous. metric tons</i>	
Animal product output		
Eggs ²	327	317
Meat	104	103
Milk	400	400

¹ As of December 31.

² Million eggs.



Turkmenistan at a Glance

Population (1991): 3.7 million
Urban population: 45%
Population growth rate (1979-89): 2.5%
Land use: Crops 2%
Major crops: Cotton, vegetables, grains, fruits, rice
Livestock sector: Poultry, goats, sheep, cattle

Turkmenistan exports the majority of its cotton crop. In the past, Eastern Europe and republics of the former Soviet Union were its primary markets. In addition to cotton, Turkmenistan produces fruits (especially grapes), vegetables, and rice. Sheep, goats, and wool are other significant products.

Turkmenistan is not self-sufficient in food and feed grains and dairy products. In the past, Turkmenistan exchanged cotton and fruits with other republics for grains and dairy products.

The World Bank and the International Monetary Fund did not offer membership to Turkmenistan in April 1992 but are expected to do so at a later date. ■

UKRAINE

A little smaller than Texas, Ukraine is mostly plains, except for the Carpathian Mountains in the west and the Crimean Mountains along the southern edge of the Crimean Peninsula. It is the second most populated republic of the former USSR. It borders Byelarus, Russia, Moldova, Poland, the Czech and Slovak Federal Republic, Hungary, and Romania.

Ukraine has often been referred to as the breadbasket of the Soviet Union because of its significance in agricultural production. Its land resources and its climate lend great potential to this area. With these rich resources, the agricultural sector produces a variety of commodities, including grains, fruits, vegetables, meat, milk, eggs, potatoes, sugar beets, and various oilseeds.

Ukraine Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Fruits and berries	2.9	2.1
Grains	51.0	38.6
Wheat	30.4	23.0
Grapes	0.8	0.7
Potatoes	16.7	14.6
Sugar beets	44.3	36.3
Sunflowerseed	2.7	2.4
Vegetables	0.5	0.5

	<i>mil. head</i>	
Livestock numbers ¹		
Cattle	24.6	23.6
Goats and sheep	8.4	7.6
Hogs	19.4	17.3

	<i>thous. metric tons</i>	
Animal product output		
Eggs ²	16.3	15.8
Meat	4.4	4.1
Milk	24.5	22.7

¹ As of December 31.

² Million eggs.



Ukraine at a Glance

Population (1991): 52 million
Urban population: 67%
Population growth rate (1979-89): 0.3%
Land use: Crops 53%
Major crops: Grains, sugar beets, fruits, vegetables, potatoes, sunflowerseed
Livestock sector: Cattle, hogs, goats, sheep

During the 1986-90 period, as a share of the former USSR total, Ukraine produced 54 percent of all sugar beets, 24 percent of grains, 25 percent of potatoes, 26 percent of vegetables, 28 percent of fruits, 23 percent of meats, 23 percent of milk, and 21 percent of eggs.

Ukraine has been a net exporter of agricultural products in inter-republic trade, while at the same time registering a trade deficit in foreign agricultural trade.

Some of the problems Ukrainian agriculture is now facing are consistent with the problems and inefficiencies of the other countries of the former Soviet Union (i.e., lack of inputs, spare parts, storage capacity). Inflation, high interest rates, lack of a system of exchange rates, and lack of equity investment structures all dampen development.

In April 1992, the World Bank and the International Monetary Fund offered membership to Ukraine. Membership in these organizations could pave the way to wide-scale international economic assistance. ■

UZBEKISTAN

Uzbekistan is one of the richest agricultural countries in Central Asia. It is one of the world's leading cotton producers and exporters. It is a large supplier of fruits, vegetables, and melons to former Soviet republics. Uzbekistan is not self-sufficient in grains, or dairy and meat products.

The main problems facing Uzbekistan are its need to feed its growing population, and increased environmental problems connected with cotton production.

Dependence on cotton has led to soil salinity and increased public health problems from excessive use of farm chemicals. Despite decisions to lessen its dependence on cotton production, cotton remains the primary hard currency export of the region.

Uzbekistan Agricultural Production

	1990	1991
	<i>thous. metric tons</i>	
Crop production		
Cotton	5,100	4,700
Fruits and berries	700	N/A
Grain	1,900	1,900
Wheat	533	400
Grapes	700	N/A
Potatoes	300	300
Vegetables	2,700	N/A

	<i>mil. head</i>	
Livestock numbers ¹		
Cattle	4.6	4.5
Goats and sheep	9.2	9.1
Hogs	0.7	0.6
Poultry	36.0	N/A

	<i>thous. metric tons</i>	
Animal product output		
Eggs ²	16.4	N/A
Meat	500.0	474.0
Milk	3,000.0	3,300.0

¹ As of December 31.

² Million eggs.



Uzbekistan at a Glance

Population (1991): 20.7 million
Urban population: 41%
Population growth rate (1979-89): 2.6%
Land use: Crops 9%
Major crops: Cotton, vegetables, grains, fruits, potatoes
Livestock sector: Goats, sheep, cattle, swine

The Government's long-term agricultural development plans call for reduced cotton area, increased crop rotation, and more stringent use of water and agricultural chemicals.

Eastern Europe has been the traditional market for Uzbek cotton exports. However, in 1990, cotton exports to Eastern Europe decreased by almost 40 percent as Uzbek producers turned to international markets. During the first 6 months of 1991, cotton exports also decreased. The breakdown of inter-republic trading has also reduced demand for Uzbek cotton in the former republics.

Despite the large surplus of cotton seed, Uzbekistan's margarine and vegetable oil industry suffers from antiquated plants and equipment. As a result, productivity is low and the quality of the products is substandard. Given its ability to sell cotton on the world market, Uzbekistan has some hard currency to import foreign goods.

In April 1992, the World Bank and the International Monetary Fund offered membership to Uzbekistan. Membership in these organizations could pave the way to wide-scale international economic assistance. ■

Glossary of International Trade Acronyms

ABEDA, Arab Bank for Economic Development in Africa

ABUP, Argentina, Brazil, Uruguay, and Paraguay Regional Trading Group (also known as MERCOSUR)

ACC, Arab Cooperation Council

ACP, African, Caribbean, and Pacific countries associated with the EC

ADB, Asian Development Bank

AFDB, African Development Bank

AID, Agency for International Development (U.S.)

ALADI, Latin American Integration Association (also abbreviated LAIA)

AMF, Arab Monetary Fund

AMU, Arab Maghreb Union

ANRPC, Association of Natural Rubber Producing Countries

APEC, Asian-Pacific Economic Cooperation

ASEAN, Association of Southeast Asian Nation's

Benelux, Belgium, Netherlands, Luxembourg Economic Union

BLEU, Belgium-Luxembourg Economic Union

CACM, Central American Common Market

CAP, Common Agricultural Policy (EC)

CARICOM, Caribbean Common Market

CBI, Caribbean Basin Initiative

CCC, Commodity Credit Corporation, USDA; also Customs Cooperation Council

CE, Council of Europe

CEAO, West African Economic Community

CEMA, Council for Mutual Economic Assistance

CER, Australia-New Zealand Closer Economic Relations

C.I.F., Cost, insurance, and freight

EAC, East African Community

EC, European Community

ECE, Economic Commission for Europe

ECLA, Economic Commission for Latin America (UN)

ECOWAS, Economic Community of West African States

ECU, European Currency Unit

EEP, USDA's Export Enhancement Program

EFTA, European Free Trade Association

EMS, European Monetary System

ESCAP, Economic and Social Commission for Asia and the Pacific (UN)

EXIM Bank, Export-Import Bank (U.S.)

FAO, Food and Agriculture Organization (UN)

FAS, Foreign Agricultural Service, USDA

FOB, Free on board

FTA, Free-trade agreement; also, free-trade area

GATT, General Agreement on Tariffs and Trade

GCC, Gulf Cooperation Council

GDP, Gross domestic product

GNP, Gross national product

GSM-I02, GSM-I03, USDA's Export Credit Guarantee Programs

GSP, Generalized System of Preferences

IBRD, International Bank for Reconstruction and Development (The World Bank)

ICA, International Coffee Agreement; also, International Cocoa Agreement

ICAC, International Cotton Advisory Committee

ICCO, International Cocoa Organization

ICO, International Coffee Organization

IDA, International Development Association (associated with The World Bank); also, International Dairy Arrangement

IDB, Inter-American Development Bank (also known as BID); also, Islamic Development Bank

IFAD, International Fund for Agricultural Development (UN)

IFC, International Finance Corporation (associated with The World Bank)

IMF, International Monetary Fund (UN)

INRO, International Natural Rubber Organization

IOOC, International Olive Oil Council

IRC, International Rice Council

ISO, International Sugar Organization

ITA, International Trade Administration, U.S. Department of Commerce

ITC, International Trade Commission (U.S.)

IWC, International Wheat Council

LAFTA, Latin American Free Trade Area

LAIA, See ALADI

LDC, Less developed country

MFA, Multifiber Arrangement

MFN, Most favored nation

MTN, Multilateral Trade Negotiations

NC, Nordic Council

NIC, Newly industrialized country

NTB, Nontariff barrier

OAPEC, Organization of Arab Petroleum Exporting Countries

OAS, Organization of American States

OAU, Organization of African Unity

ODECA, Organization of Central American States

OECD, Organization for Economic Cooperation and Development

OPEC, Organization of Petroleum Exporting Countries

OPIC, Overseas Private Investment Corporation (U.S.)

P.L.480, U.S. Public Law 480, Agricultural Trade Development and Assistance Act

SAARC, South Asian Association for Regional Cooperation

SEED Act, Support for East European Democracies Act (U.S.)

SELA, Latin American Economic System

UNCTAD, UN conference on Trade and Development

UPEB, Union of Banana Exporting Countries

USEC, U.S. Mission to the European Communities

USTR, United States Trade Representative

VAT, Value-added tax

WFC, World Food Council

WSG, International Wool Study Group

Atlas of World Agriculture

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The following section presents a visual guide to world agriculture. Every effort was made to obtain accurate, complete, and up-to-date information. However, because of differences among data sources and the lack of reliable

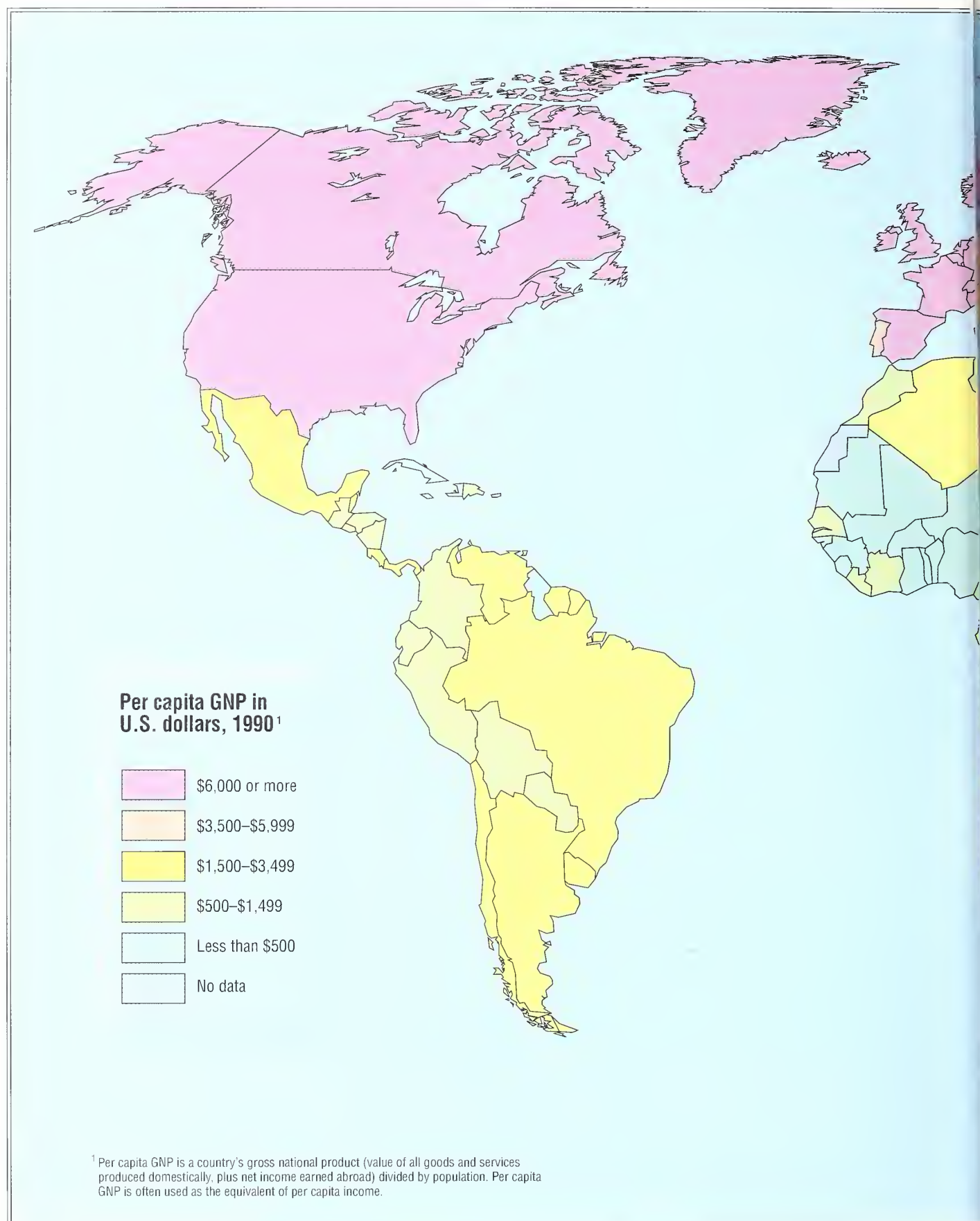
statistics on many countries, the reader may find some inconsistencies and omissions. Boundary representations on the maps are not necessarily authoritative, and inclusion of disputed

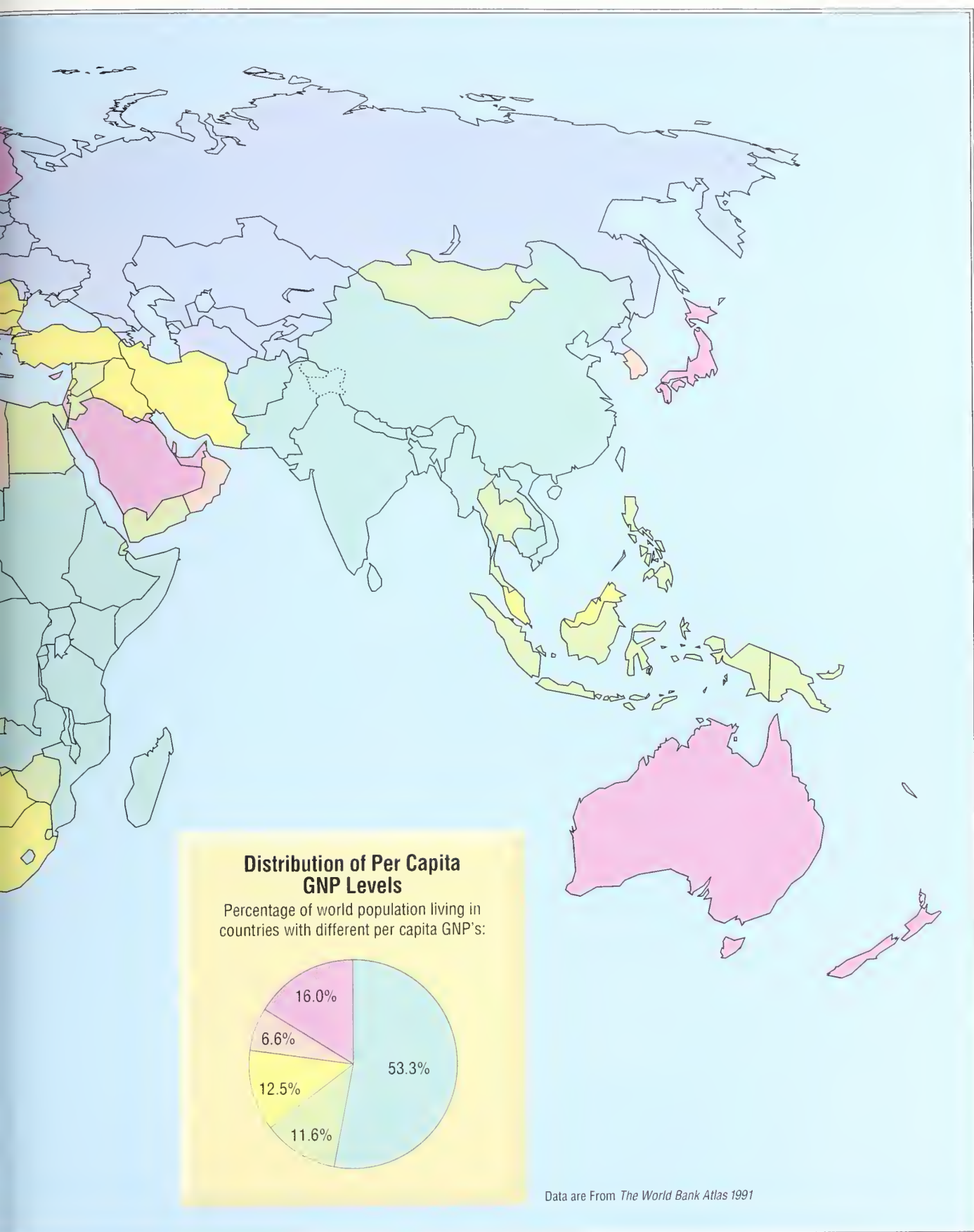
boundaries does not imply official U.S. recognition. The maps identified by a copyright symbol may not be reproduced without permission from the originating source.

World Map and Time Zones

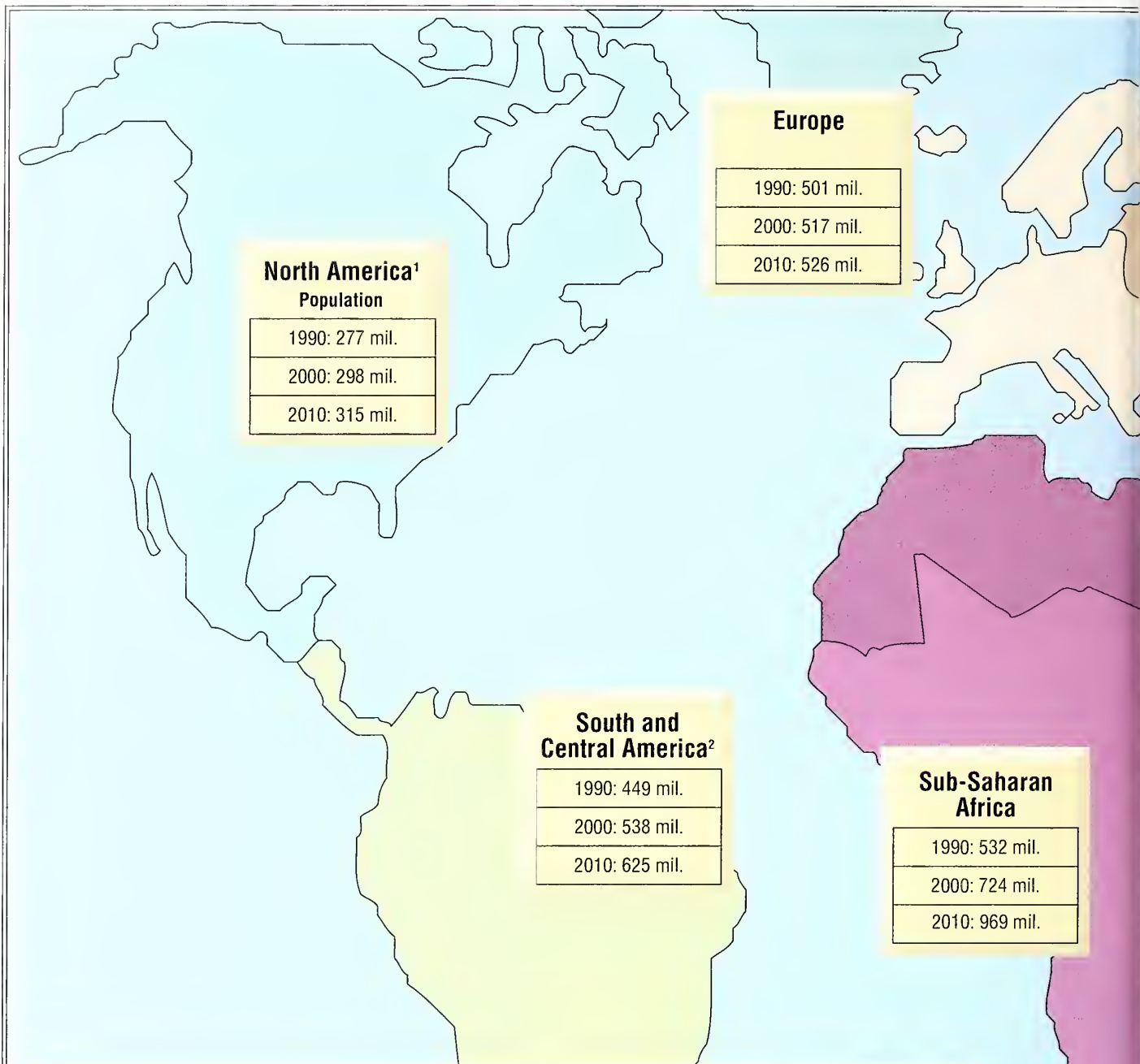


Per Capita GNP by Country

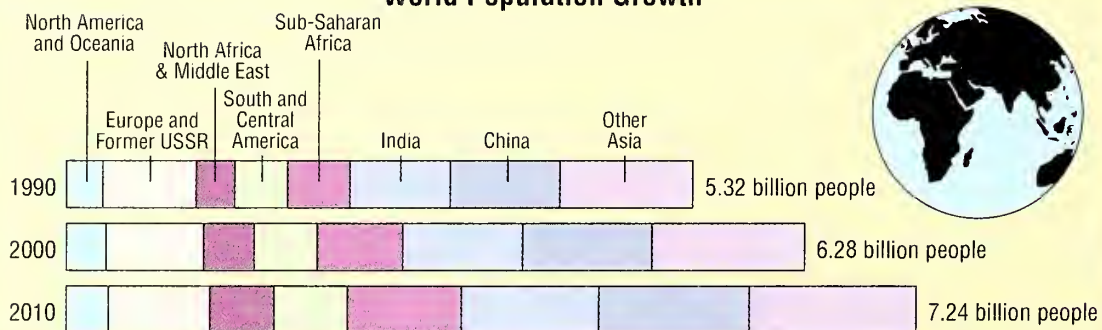


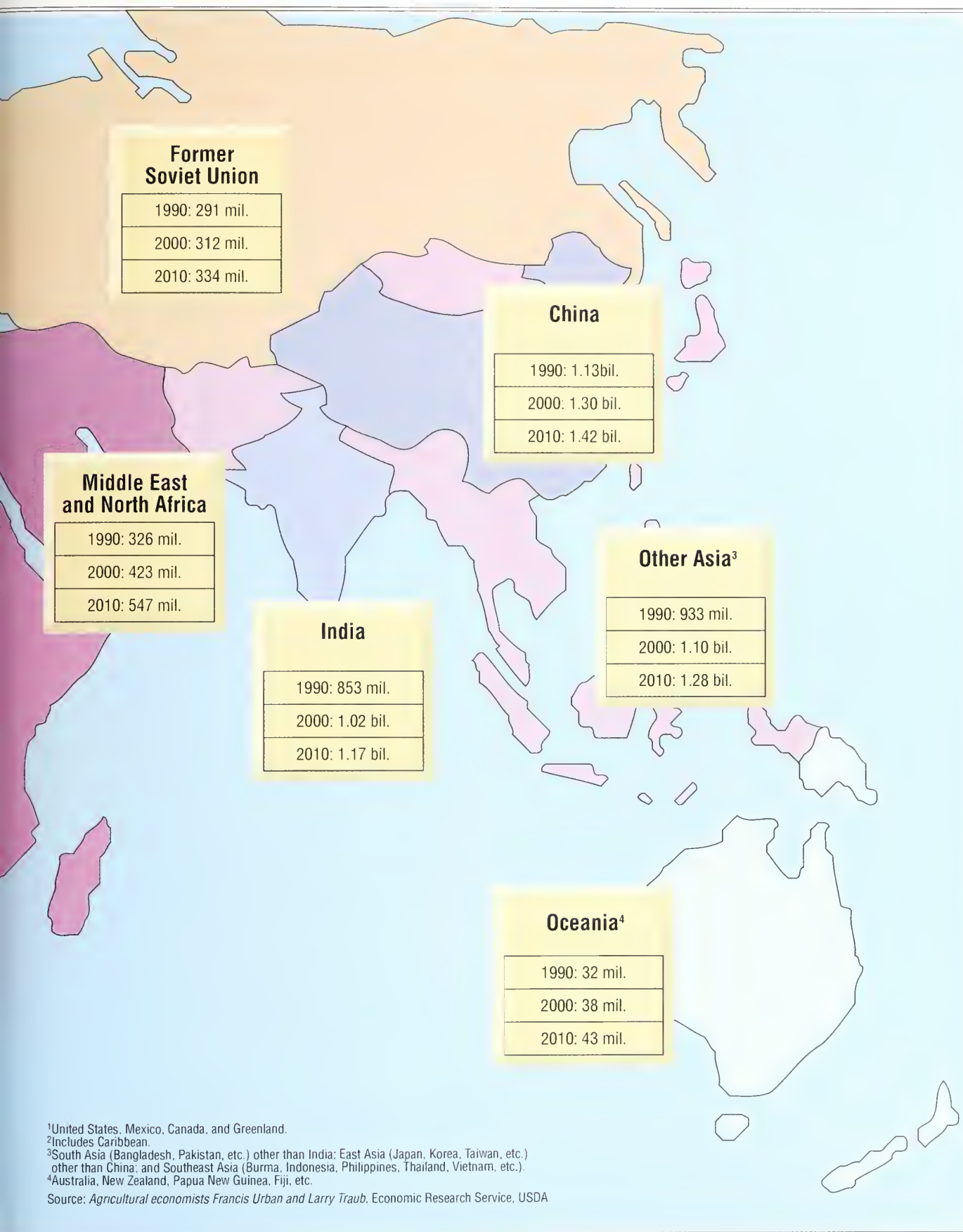


World Population Projections by Region

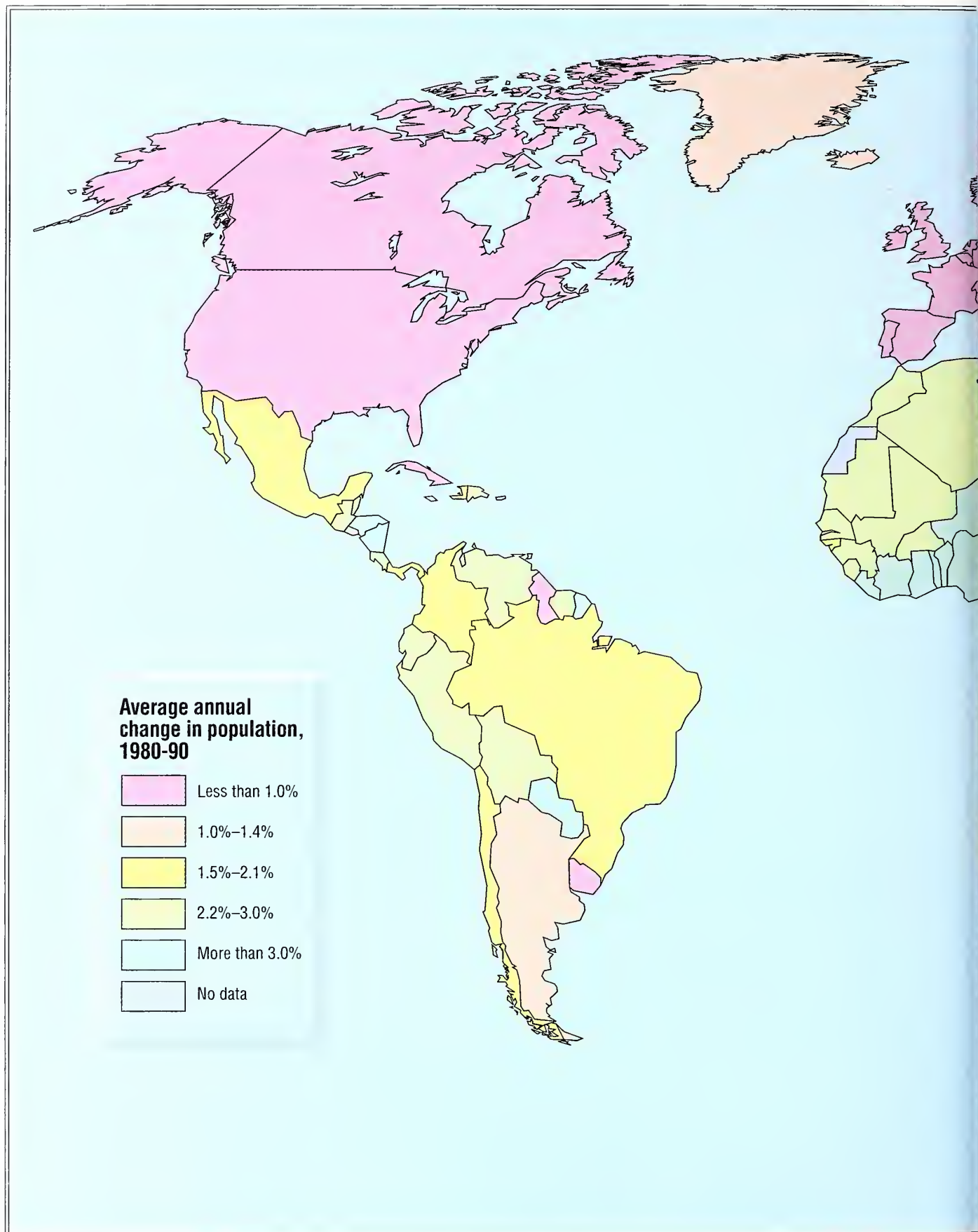


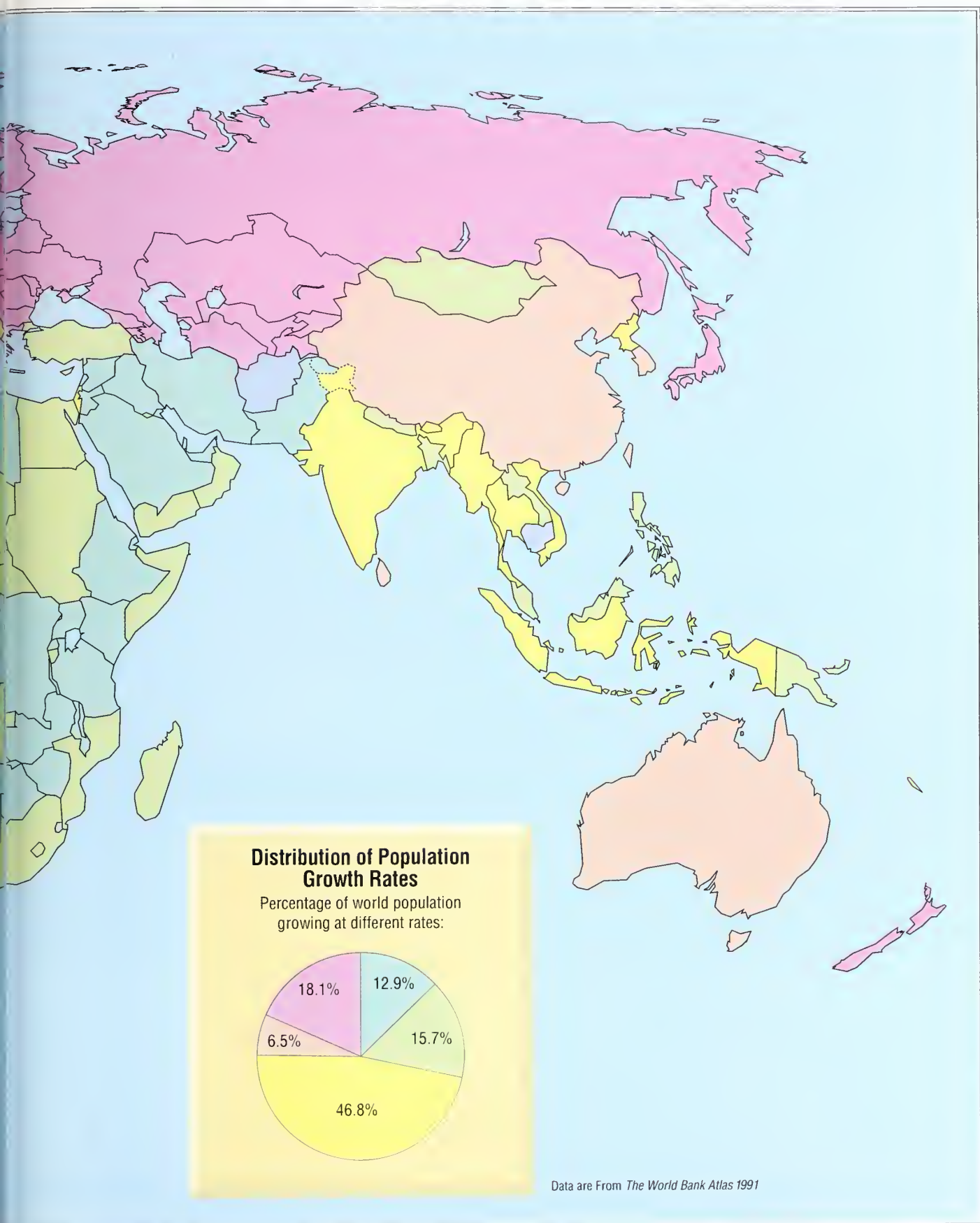
World Population Growth



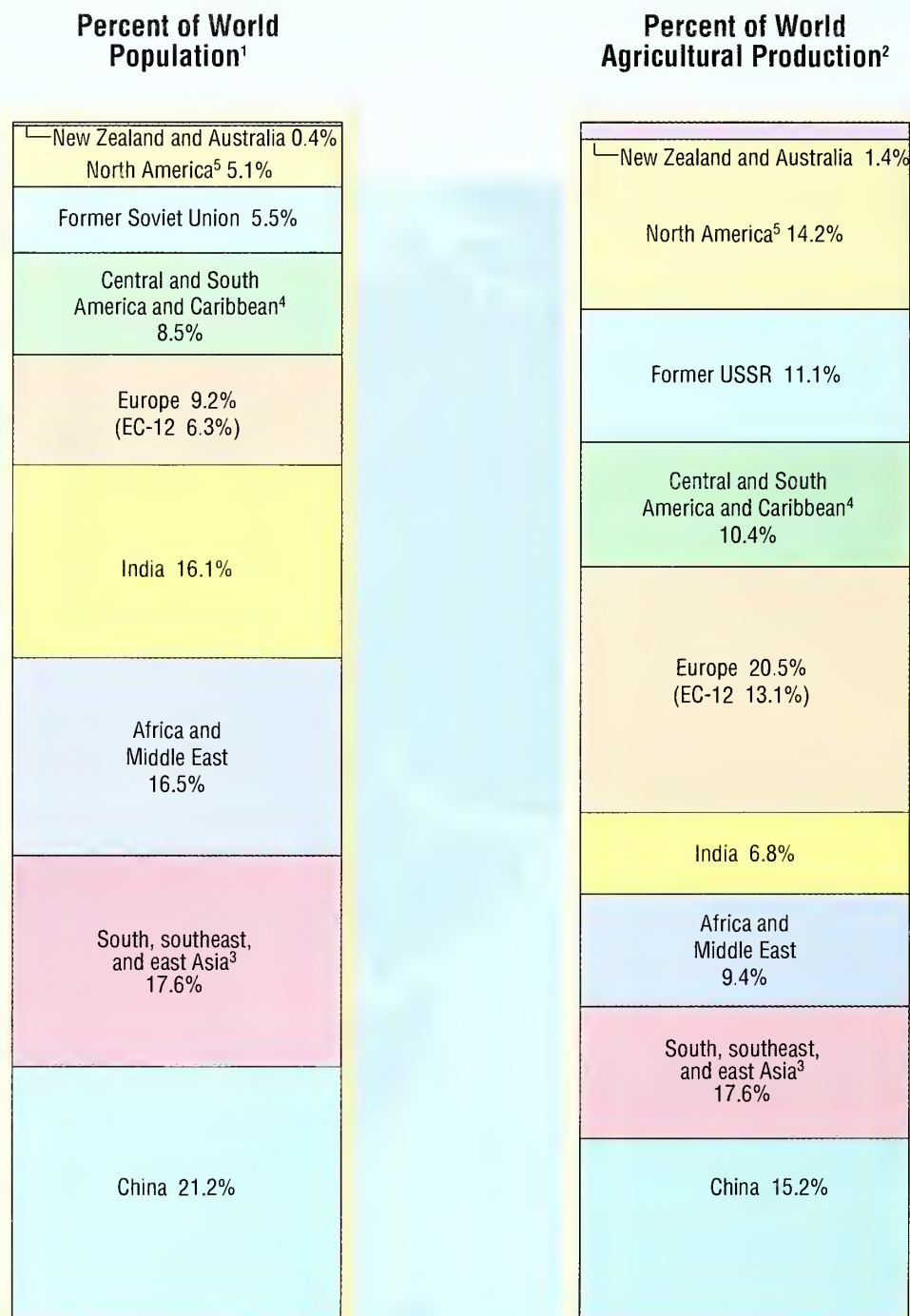


Population Growth Rates by Country





Comparisons of Population and Agricultural Production



¹Based on 1992 population estimates. Source: *World Population by Country and Region, 1950-2050*, Staff Report, Economic Research Service, USDA, forthcoming.

²Percentages are for 1988 and show estimated shares of world agricultural production, based on value of raw commodities produced (processed products excluded). Values are calculated using a single "world price" for each commodity. Thus, 1 ton of wheat has the same value no matter where it is produced. Source: *World Agriculture Trends and Indicators, 1970-89*, Economic Research Service, USDA, September 1990.

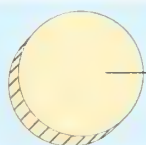
³Excludes India

⁴Includes Mexico

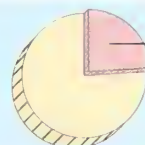
⁵Excludes Mexico

Food Costs as a Share of Spendable Income

Averages for selected countries¹

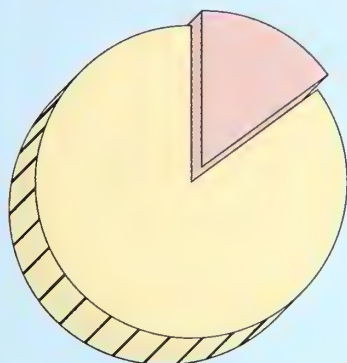


Total personal consumption expenditures per capita



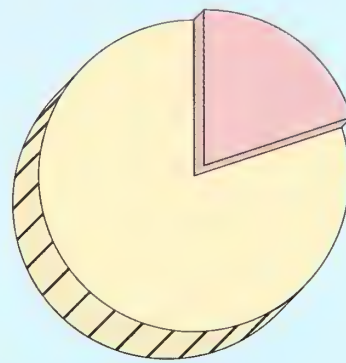
Percent spent on food and beverages²

15% or less



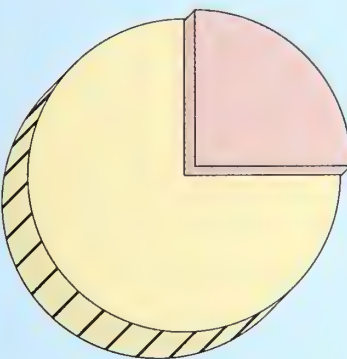
United States 12%
Canada 14%
Luxembourg 15%
New Zealand 15%

16%–20%



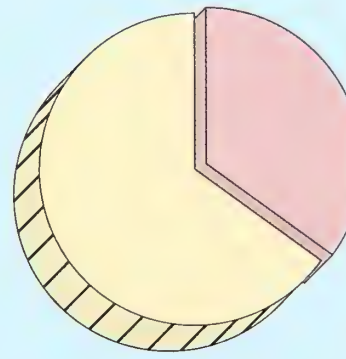
Netherlands 17%
Hong Kong 17%
Belgium 18%
France 18%
Denmark 19%
United Kingdom 19%
Australia 19%
Austria 19%
Sweden 20%
Germany 20%
Italy 20%

21%–25%



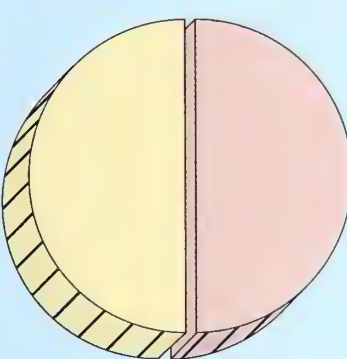
Finland 21%
Singapore 22%
Norway 23%
Spain 24%

26%–35%



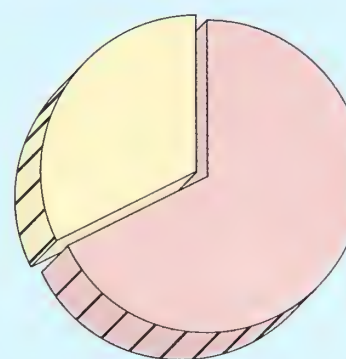
Switzerland 26%
Israel 27%
Malaysia 28%
Former USSR 30%
Zimbabwe 30%
Colombia 33%
South Africa 34%
Ireland 35%
Thailand 35%

36%–50%



Ecuador 36%
Greece 36%
Portugal 36%
Jordan 39%
Venezuela 39%
Jamaica 44%
Honduras 45%

More than 50%



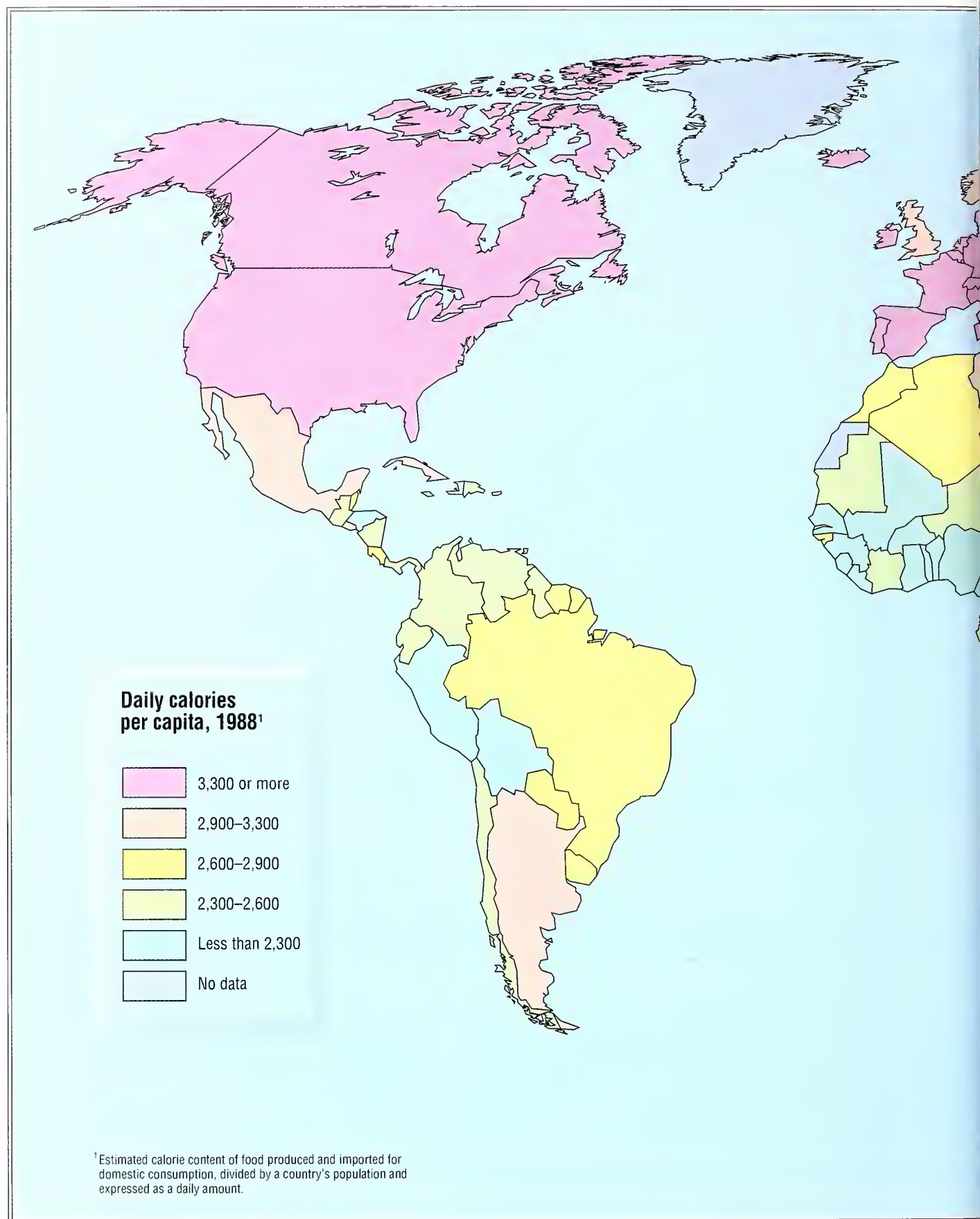
India 53%
Sri Lanka 53%
Philippines 55%
Sudan 64%

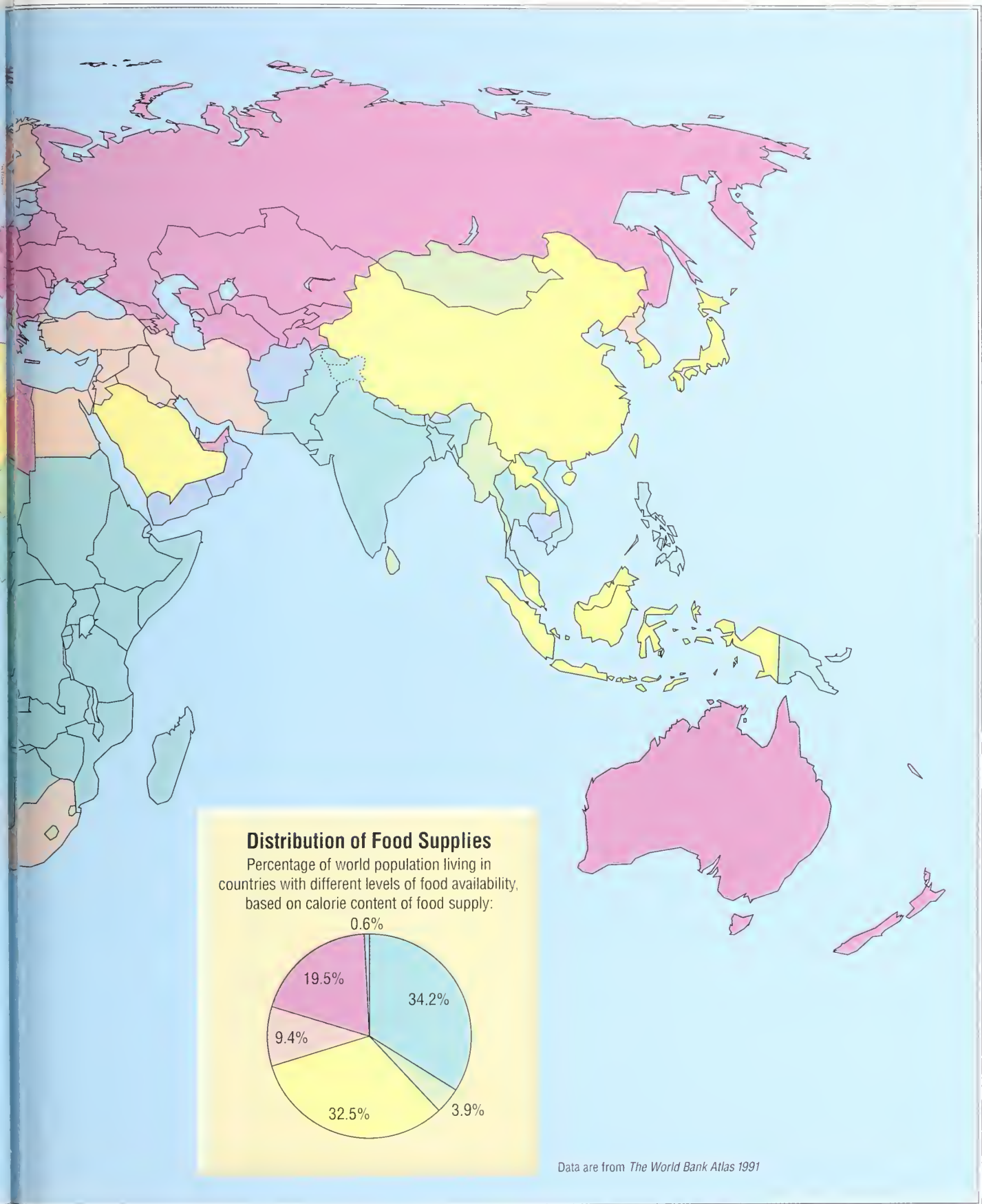
¹1989 data, except India, Ireland, and Jamaica (1988); Spain and Zimbabwe (1987); Honduras, Jordan, and Portugal (1986); and Malaysia and Sudan (1983).

²Percentages cover spending for at-home consumption of food and beverages and do not include "dining out" expenditures.

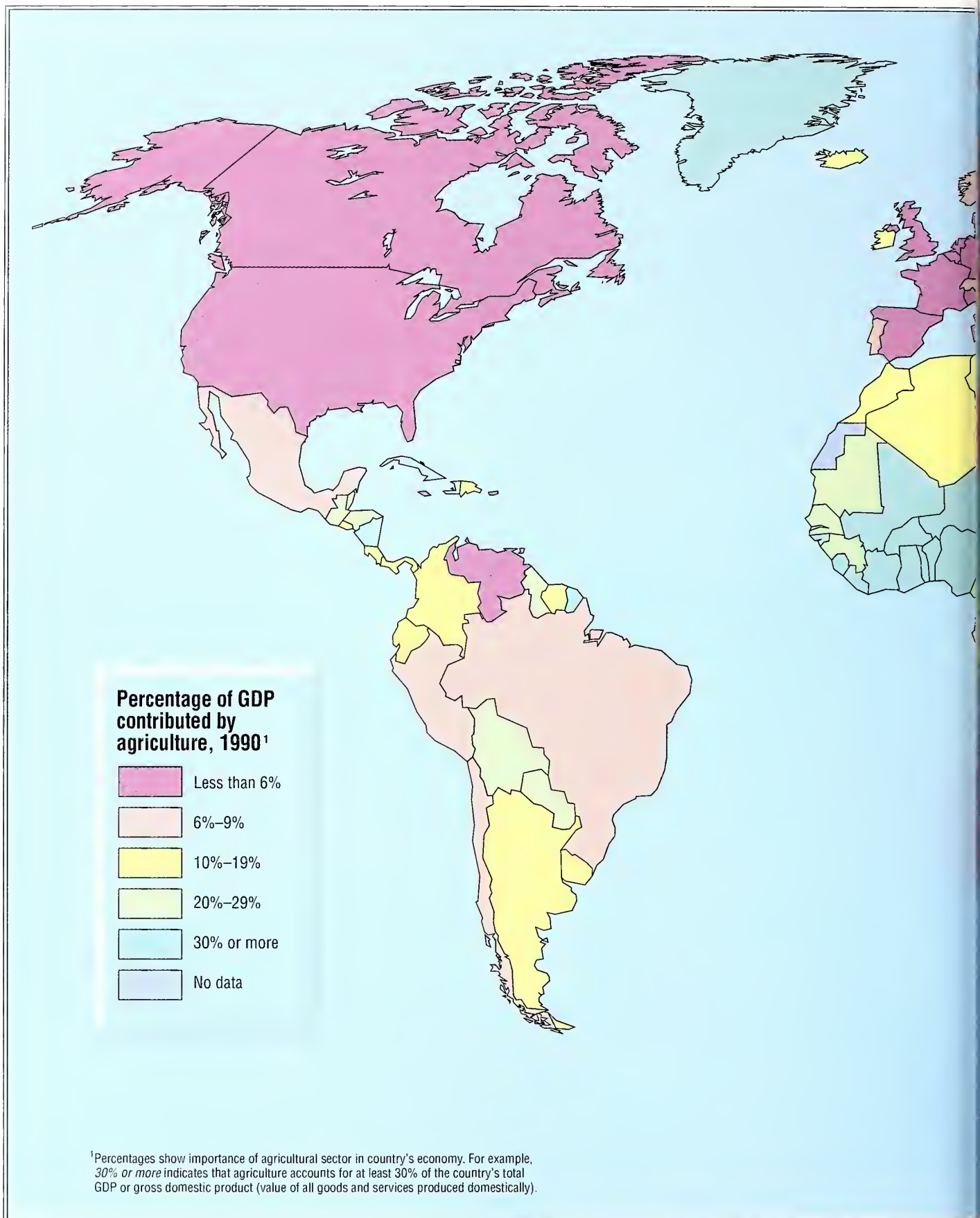
Source: Agricultural economist Larry Traub, Economic Research Service, USDA, from United Nations statistics.

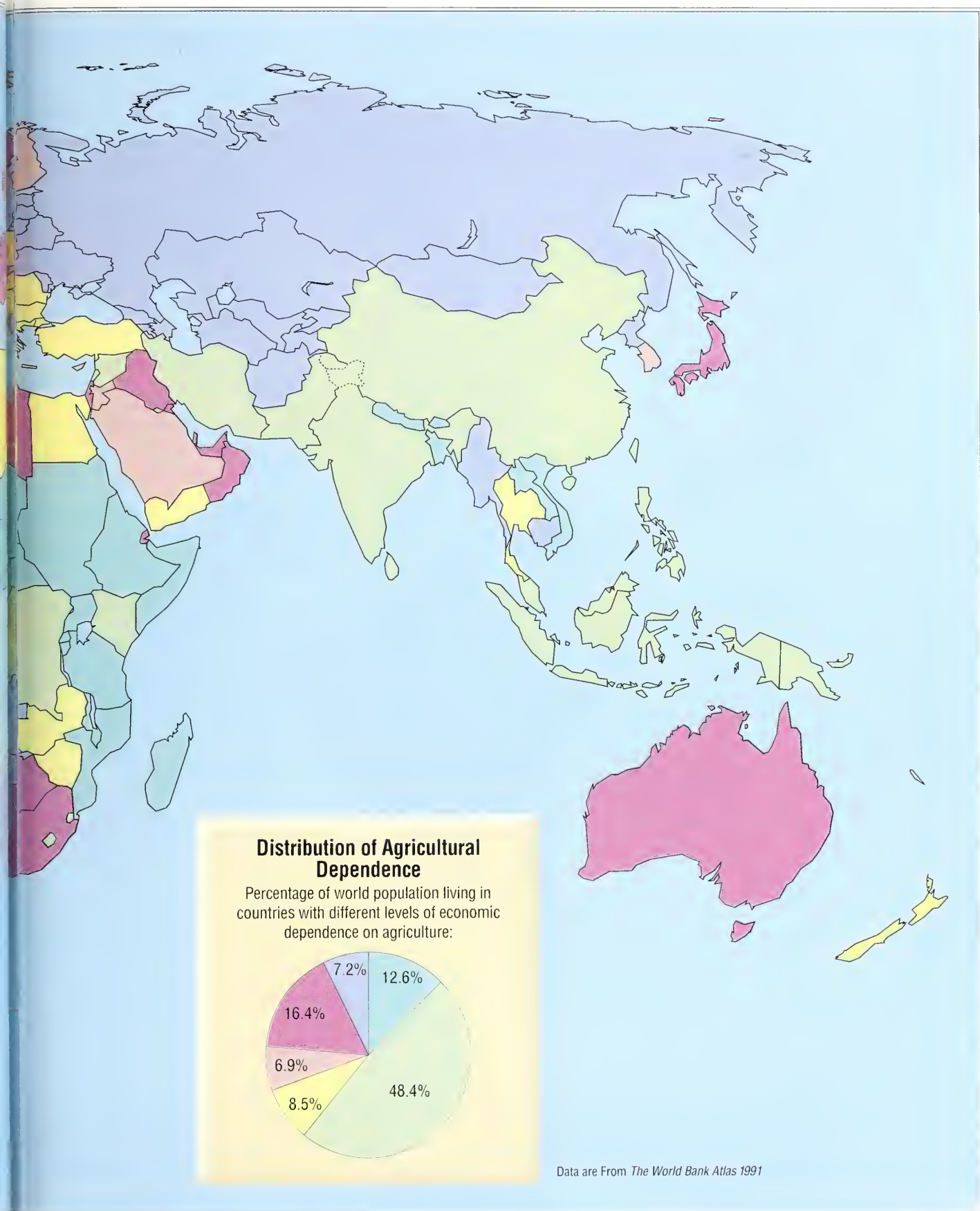
Daily Calorie Supply Per Capita



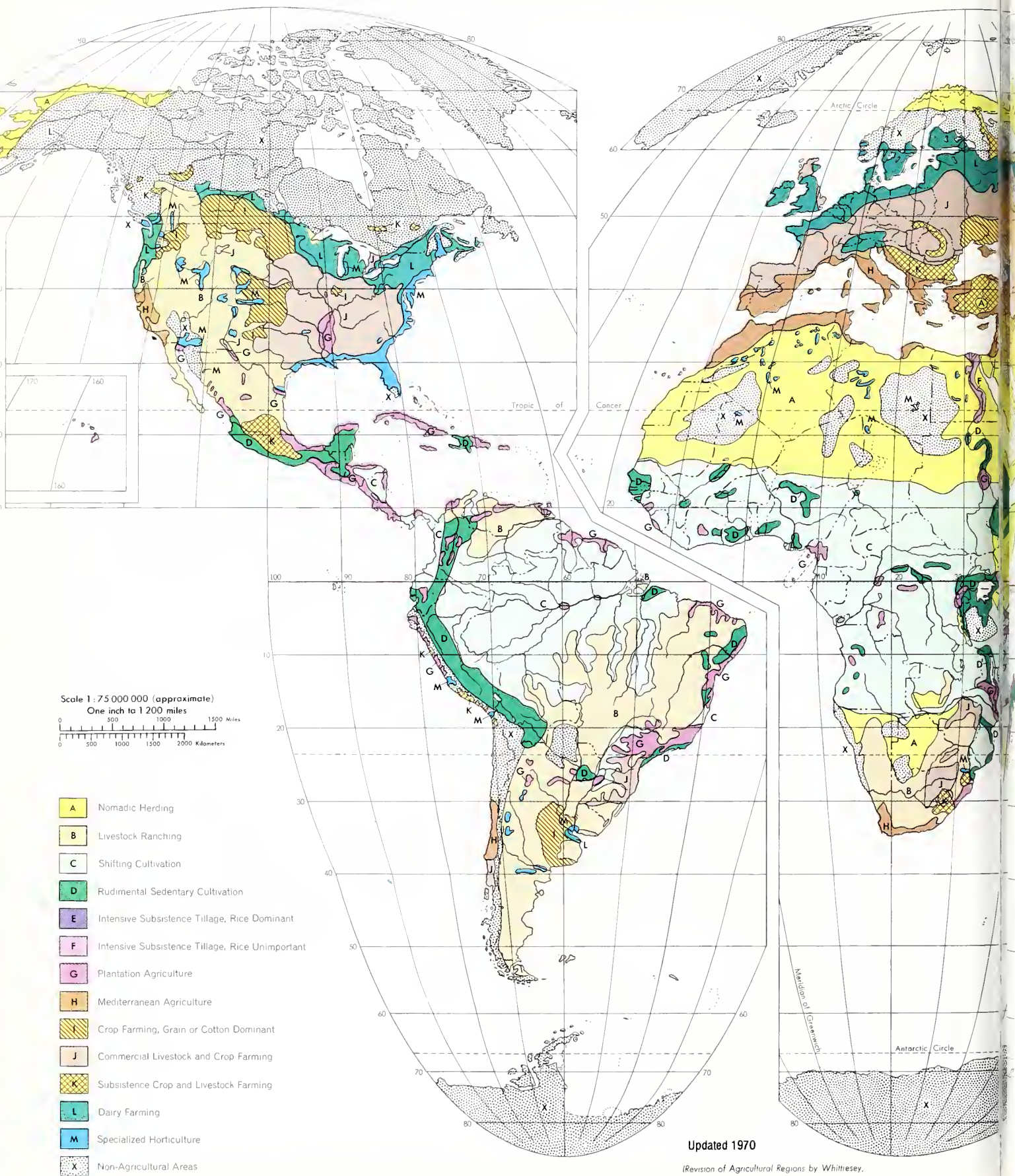


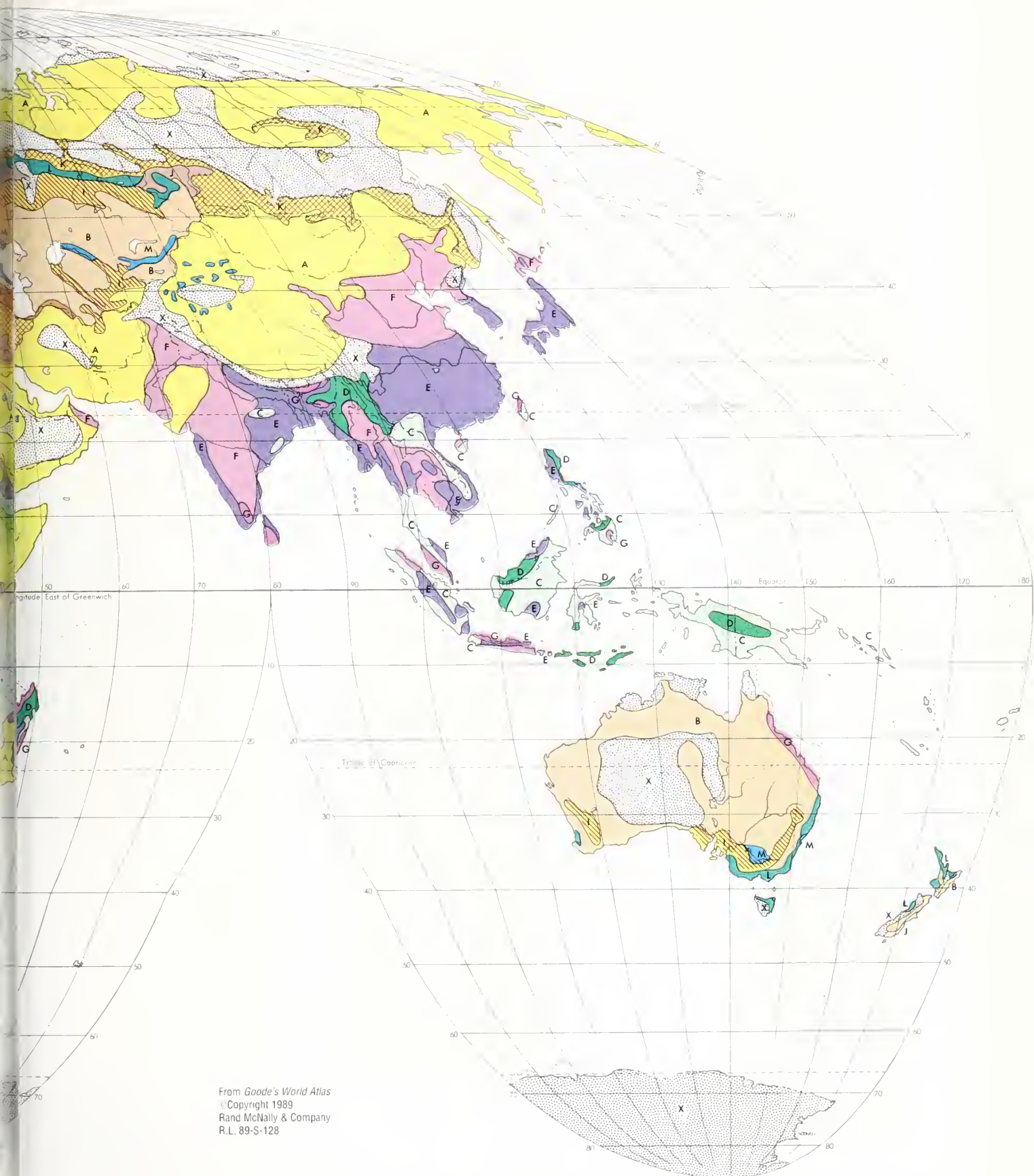
Economic Dependence on Agriculture





Major Agricultural Regions Around the World





Goode's Homolosine Equal Area Projection (Condensed)

Key Harvest Periods for Corn and Soybeans



Mexico and Central America

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

User Guide

Region	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified

General harvest period for entire region

U.S. and Canada

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Western Europe

	Corn	Soybeans
JAN		
FEB		
MAR		
APR		
MAY		
JUN	Greece	
JUL	Greece, Spain	Italy
AUG	Greece, Spain	Italy
SEP		Italy
OCT		
NOV		
DEC		

South America

	Corn	Soybeans
JAN		
FEB		
MAR	South	
APR	South	
MAY	South	
JUN	South	
JUL		
AUG	North	
SEP	North	
OCT	North	
NOV	North	
DEC		

Central and Southern Africa

	Corn	Soybeans
JAN		
FEB		
MAR		
APR	Southern	
MAY	Southern	
JUN	Southern	
JUL		
AUG		
SEP	Central	
OCT	Central	
NOV	Central	
DEC	Central	

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		Yugoslavia
AUG		Yugoslavia
SEP		
OCT		
NOV		
DEC		

Former USSR

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP	India	China
OCT	India	China, India
NOV	India	
DEC	India	






North Africa and Middle East

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL	Morocco	
AUG	Morocco, Turkey	
SEP	Morocco, Turkey	
OCT	Morocco	
NOV		
DEC		




Southeast Asia

Corn Soybeans

JAN	Philippines	
FEB	Philippines	
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC	Philippines	

Australia and New Zealand

Corn Soybeans

JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Wheat



Mexico and Central America

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

U.S. and Canada

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Western Europe

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY	Greece, Spain, Italy	
JUN	Greece, Spain, Italy	Italy
JUL		Italy, France
AUG		Italy, France, Ireland
SEP	Ireland	Italy, Ireland
OCT		Ireland
NOV		
DEC		

South America

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Central and Southern Africa

	Winter Wheat	Spring Wheat
JAN	South	
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		South
NOV		South
DEC	South	

User Guide

Region	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified



General harvest period for entire region

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		Hungary
AUG		Poland
SEP		Poland
OCT		
NOV		
DEC		



Former USSR

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR	India	
APR	India	
MAY	India, China	
JUN	India, China	
JUL	India	China
AUG		China
SEP		
OCT		
NOV		
DEC		




North Africa and Middle East

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Southeast Asia

	Winter Wheat	Spring Wheat
JAN	Burma	
FEB	Burma	
MAR	Burma	
APR	Burma	
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Australia and New Zealand

	Winter Wheat	Spring Wheat
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Rice and Cotton



Mexico and Central America

	Rice	Cotton
JAN		Central America
FEB		Central America
MAR		Central America
APR		
MAY		
JUN		
JUL		
AUG		Mexico
SEP		Mexico
OCT		Mexico
NOV		
DEC		

U.S. and Canada

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Western Europe

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		Greece, Spain
OCT		Greece, Spain
NOV		Greece, Spain
DEC		

South America

	Rice	Cotton
JAN		Colombia, NE Brazil
FEB		Colombia, S. Brazil, Argen.
MAR	South	Colombia, S. Brazil, Argen.
APR	South	S. Brazil, Argentina
MAY	South	S. Brazil, Argentina
JUN	South	Argentina
JUL		
AUG		NE Brazil
SEP	North	NE Brazil
OCT	North	NE Brazil
NOV	North	NE Brazil
DEC	North	Colombia, NE Brazil

Central and Southern Africa

	Rice	Cotton
JAN		West Africa, Sudan, Kenya
FEB		West Africa, Sudan, Kenya
MAR		West Africa, Sudan, Kenya
APR		Southern Africa, Kenya
MAY		Southern Africa, Tanzania
JUN		Southern Africa, Tanzania
JUL		Southern Africa, Kenya, Tanzania
AUG		Southern Africa, Kenya
SEP	Central	Kenya
OCT	Central	West Africa, Kenya
NOV	Central	West Africa, Sudan, Kenya
DEC	Central	West Africa, Sudan, Kenya

User Guide

Region	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified




General harvest period for entire region

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Former USSR

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Rice	Cotton
JAN	India	India, Pakistan
FEB		India, Pakistan
MAR	India	India
APR	India	
MAY	India	
JUN		
JUL	China, Bangladesh	
AUG	China, Bangladesh	
SEP	China, India	China
OCT	China, India	China, India
NOV	China, India	China, India, Pakistan
DEC	India	India, Pakistan







North Africa and Middle East

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL	Morocco	
AUG	Morocco	
SEP		Egypt, Syria, Turkey
OCT		Egypt, Syria, Turkey
NOV		Syria, Turkey
DEC		Syria, Turkey

Southeast Asia

	Rice ¹	Cotton
JAN	North	
FEB	North	
MAR	South	
APR	South	
MAY	South	
JUN	South	
JUL		
AUG		
SEP	North	
OCT	North	
NOV	North	
DEC	North	

Australia and New Zealand

	Rice	Cotton
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

¹ Minor harvests all year.

Key Harvest Periods for Sugar



Mexico and Central America

	Cane Sugar	Beet Sugar
JAN	Costa Rica, Mexico, Cuba, Guatemala	
FEB	Costa Rica, Mexico, Cuba, Guatemala	
MAR	Costa Rica, Mexico, Cuba, Guatemala	
APR	Mexico, Cuba, Guatemala	
MAY	Mexico, Cuba	
JUN	Mexico, Cuba	
JUL	Mexico	
AUG	Mexico	
SEP		
OCT	Costa Rica	
NOV	Costa Rica, Mexico	
DEC	Costa Rica, Mexico, Guatemala	

U.S. and Canada

	Cane Sugar	Beet Sugar
JAN	U.S.	
FEB	U.S.	
MAR	U.S.	
APR	U.S.	
MAY	U.S.	
JUN		
JUL		California
AUG		California
SEP		
OCT	U.S.	Canada
NOV	U.S.	Canada
DEC	U.S.	Canada

Western Europe

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR	Spain	
MAY	Spain	
JUN	Spain	
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South America

	Cane Sugar	Beet Sugar
JAN	Venezuela, Colombia	
FEB	Venezuela, Colombia	
MAR	Venezuela, Colombia	Chile
APR	Venezuela, Colombia	Chile
MAY	Venezuela, Colombia	Chile
JUN	Venezuela, Colombia, So. Brazil	Chile
JUL	Venezuela, Colombia, So. Brazil	Chile
AUG	Venezuela, Brazil	Chile
SEP	Venezuela, Brazil, Colombia	Chile
OCT	Venezuela, NE Brazil, Colombia	
NOV	Venezuela, NE Brazil, Colombia	
DEC	Venezuela, NE Brazil, Colombia	

Central and Southern Africa

	Cane Sugar	Beet Sugar
JAN	Egypt, Ethiopia	
FEB	Egypt, Ethiopia	
MAR	Egypt, Ethiopia	
APR	Egypt, Ethiopia	
MAY	Southern Africa, Egypt, Ethiopia	
JUN	Southern Africa, Egypt, Ethiopia	
JUL	Southern Africa, Ethiopia	
AUG	Southern Africa, Ethiopia	
SEP	Southern Africa, Ethiopia	
OCT	Southern Africa, Ethiopia	
NOV	Southern Africa, Ethiopia	
DEC	Southern Africa, Egypt, Ethiopia	

User Guide





Region	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified






General harvest period for entire region

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

Eastern Europe

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Former USSR

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

South and East Asia

	Cane Sugar	Beet Sugar
JAN	China, India, Bangladesh, Japan	China, Japan
FEB	China, India, Bangladesh, Japan	Japan
MAR	China, India, Bangladesh	
APR	China, Bangladesh	
MAY	China	
JUN	China	
JUL	China	
AUG	China	
SEP	China	China
OCT	China, Japan, Bangladesh	China, Japan
NOV	China, India, Bangladesh, Japan	China, Japan
DEC	China, India, Bangladesh, Japan	China, Japan









North Africa and Middle East

	Cane Sugar	Beet Sugar
JAN	Turkey	Turkey
FEB	Turkey	Turkey
MAR		
APR		
MAY		
JUN		North Africa
JUL		North Africa
AUG	Turkey	N. Africa, Turkey
SEP	Turkey	N. Africa, Turkey
OCT	Turkey	N. Africa, Turkey
NOV	Turkey	N. Africa, Turkey
DEC	Turkey	Turkey

Southeast Asia

	Cane Sugar	Beet Sugar
JAN	Thailand, Philippines	
FEB	Thailand, Philippines	
MAR	Thailand, Philippines	
APR	Thailand, Indo., Philippines	
MAY	Thailand, Indo., Philippines	
JUN	Indonesia, Philippines	
JUL	Indonesia, Philippines	
AUG	Indonesia, Philippines	
SEP	Indonesia, Philippines	
OCT	Indonesia, Philippines	
NOV	Thailand, Indo., Philippines	
DEC	Thailand, Indo., Philippines	

Australia and New Zealand

	Cane Sugar	Beet Sugar
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		

Key Harvest Periods for Coffee and Citrus



Mexico and Central America

	Coffee	Citrus
JAN		Mexico
FEB		Mexico
MAR		Mexico
APR		Mexico
MAY		Mexico
JUN		
JUL		
AUG	Central America	
SEP	Central America	Mexico
OCT	Central America	Mexico
NOV		Mexico
DEC		Mexico

User Guide

Region	Coffee	Citrus
JAN		
FEB		
MAR		
APR		
MAY		
JUN		
JUL		
AUG		

Harvest in geographic area(s) specified

General harvest period for entire region

U.S. and Canada

	Coffee	Citrus ¹
JAN		Calif., Ariz., Texas, Fl.
FEB		Calif., Ariz., Texas, Fl.
MAR		Calif., Ariz., Texas, Fl.
APR		Calif., Ariz., Florida
MAY		California, Florida
JUN		California, Florida
JUL		California
AUG		California
SEP		California
OCT		California
NOV		Calif., Ariz., Texas
DEC		Calif., Ariz., Texas, Fl.

¹ Harvest periods shown are for oranges.

Western Europe

	Coffee	Citrus
JAN		Mediterranean
FEB		Mediterranean
MAR		Mediterranean
APR		Mediterranean
MAY		
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		
DEC		Mediterranean

South America

	Coffee	Citrus ¹
JAN	Venezuela	
FEB		
MAR	Colombia	
APR	Colombia, Brazil	Brazil
MAY	Colombia, Brazil	Brazil
JUN	Brazil	Brazil
JUL	Brazil	Brazil
AUG	Brazil	Brazil
SEP	Brazil	Brazil
OCT	Venezuela	Brazil
NOV	Venezuela	Brazil
DEC	Venezuela	Brazil

¹ Harvest periods shown are for oranges.

Central and Southern Africa

	Coffee	Citrus
JAN	Cote d'Ivoire, Ethiopia, Tanz.	
FEB	Cote d'Ivoire, Tanzania	
MAR	Cote d'Ivoire, Tanzania	
APR	Cote d'Ivoire	
MAY		
JUN		
JUL		
AUG		
SEP		
OCT	Cote d'Ivoire	
NOV	Cote d'Ivoire, Ethiopia, Tanz.	
DEC	Cote d'Ivoire, Ethiopia, Tanz.	

Source: Meteorologist Ray Motha, Joint Agricultural Weather Facility, World Agricultural Outlook Board, USDA.

North Africa and Middle East

	Coffee	Citrus
JAN		Northwest Africa
FEB		Northwest Africa
MAR		Northwest Africa
APR		Northwest Africa
MAY		Northwest Africa
JUN		
JUL		
AUG		
SEP		
OCT		
NOV		Northwest Africa
DEC		Northwest Africa

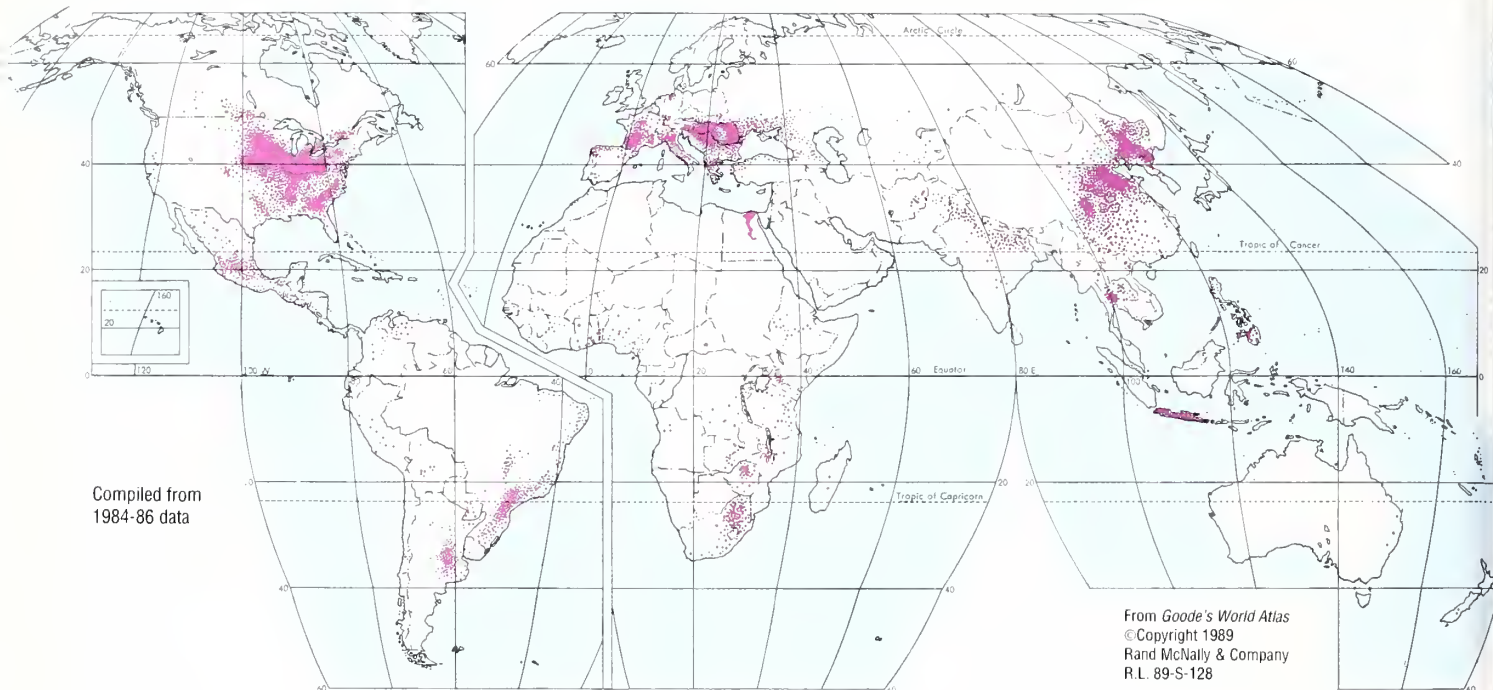
Southeast Asia

	Coffee	Citrus
JAN	Philippines	
FEB	Philippines	
MAR	Philippines	
APR	Philippines	
MAY	Indonesia	
JUN	Indonesia	
JUL	Indonesia	
AUG	Indonesia	
SEP	Indonesia	
OCT	Indonesia	
NOV	Philippines, Indonesia	
DEC	Philippines, Indonesia	

South and East Asia

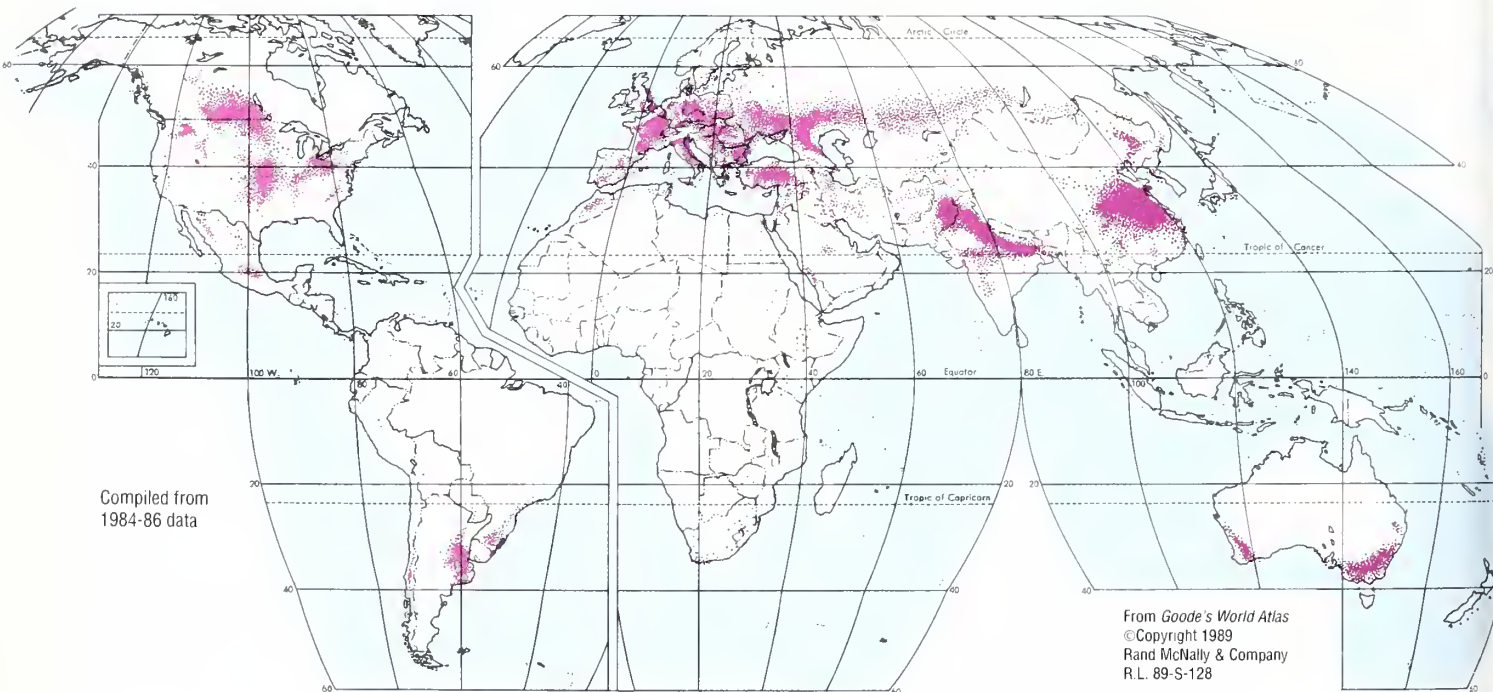
	Coffee	Citrus
JAN	India	
FEB	India	
MAR		
APR		
MAY		
JUN		South Asia
JUL		South Asia
AUG		South Asia
SEP		
OCT	India	
NOV	India	
DEC	India	

Where Corn Is Produced



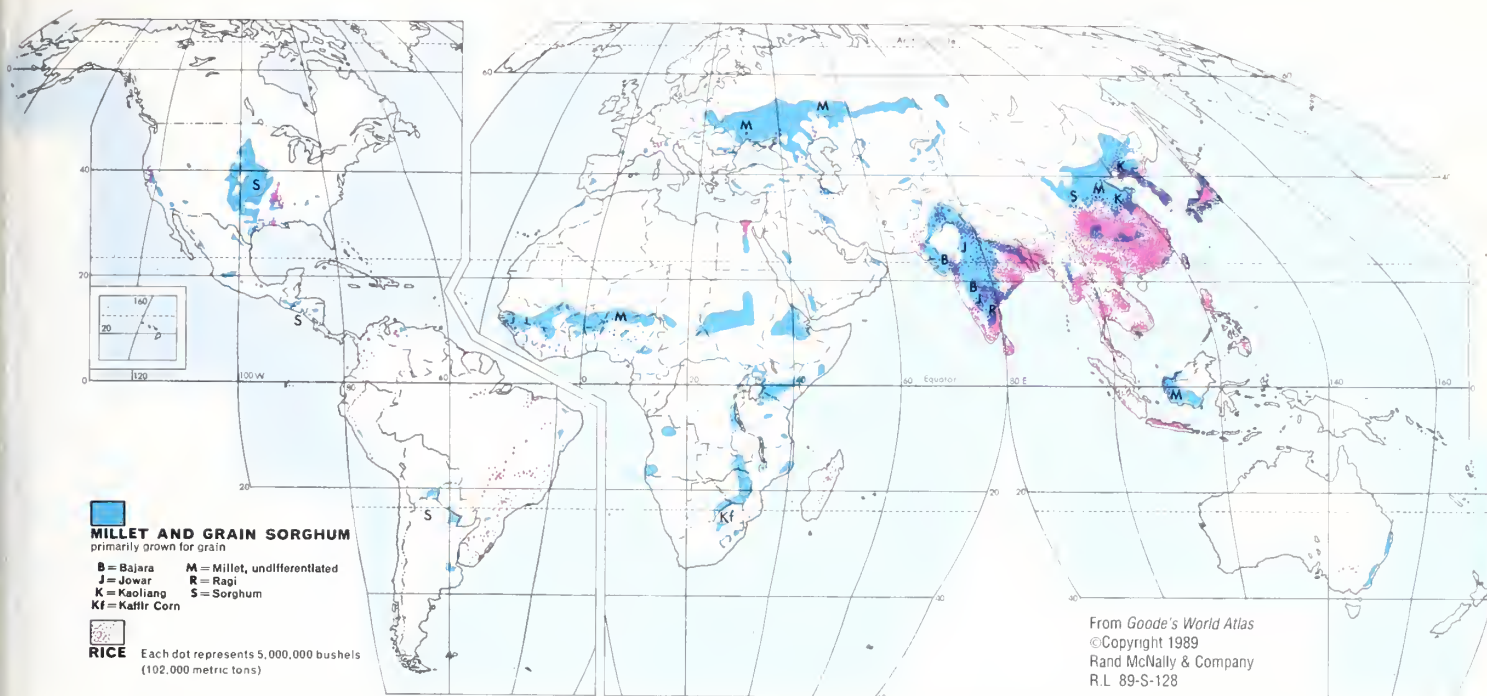
CORN Each dot represents 3,000,000 bushels (76,200 metric tons)

Where Wheat Is Produced



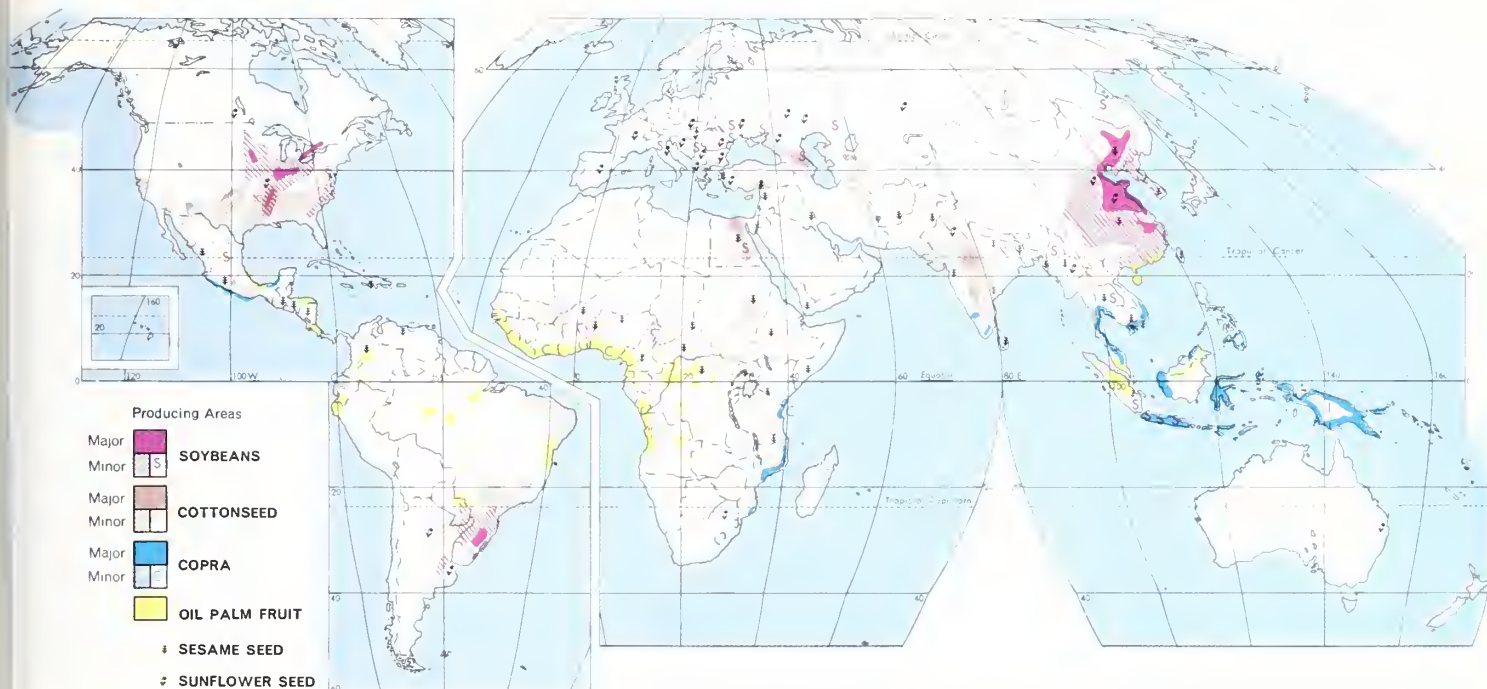
WHEAT Each dot represents 2,000,000 bushels (54,400 metric tons)

Where Rice, Millet, and Grain Sorghum Are Produced



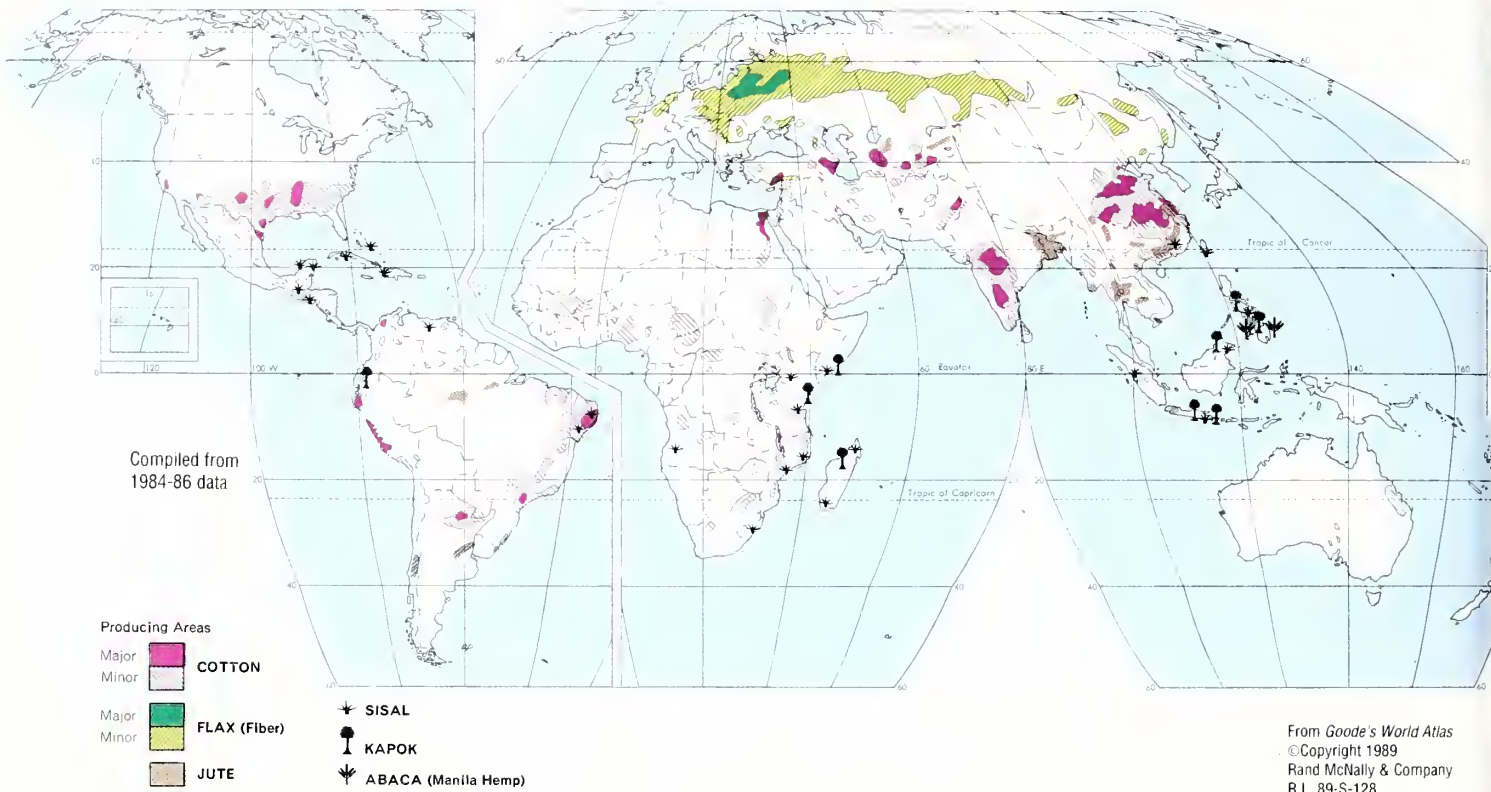
Compiled from
1984-86 data

Where Soybeans and Other Oilseeds Are Produced

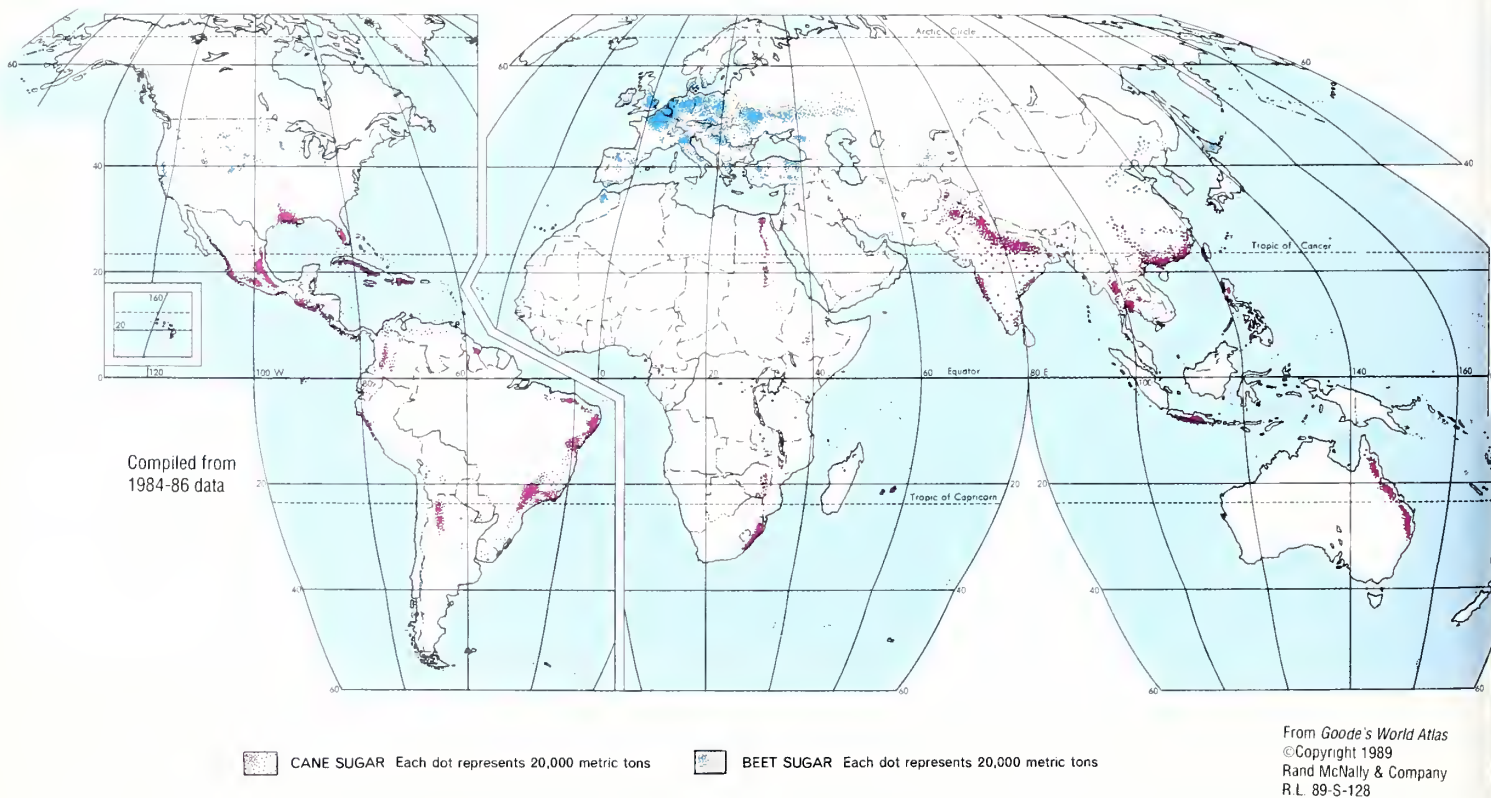


Compiled from
1984-86 data

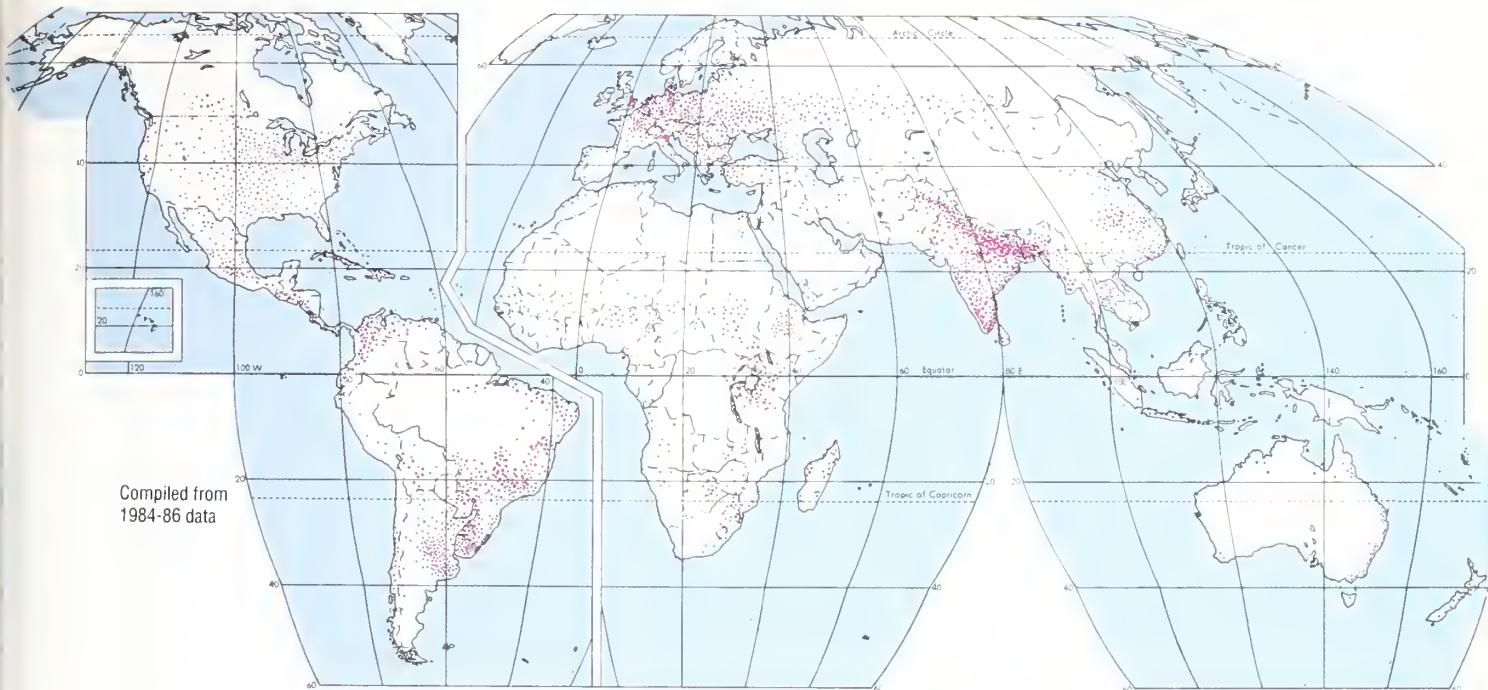
Where Cotton and Other Natural Fibers Are Produced



Where Sugar Is Produced

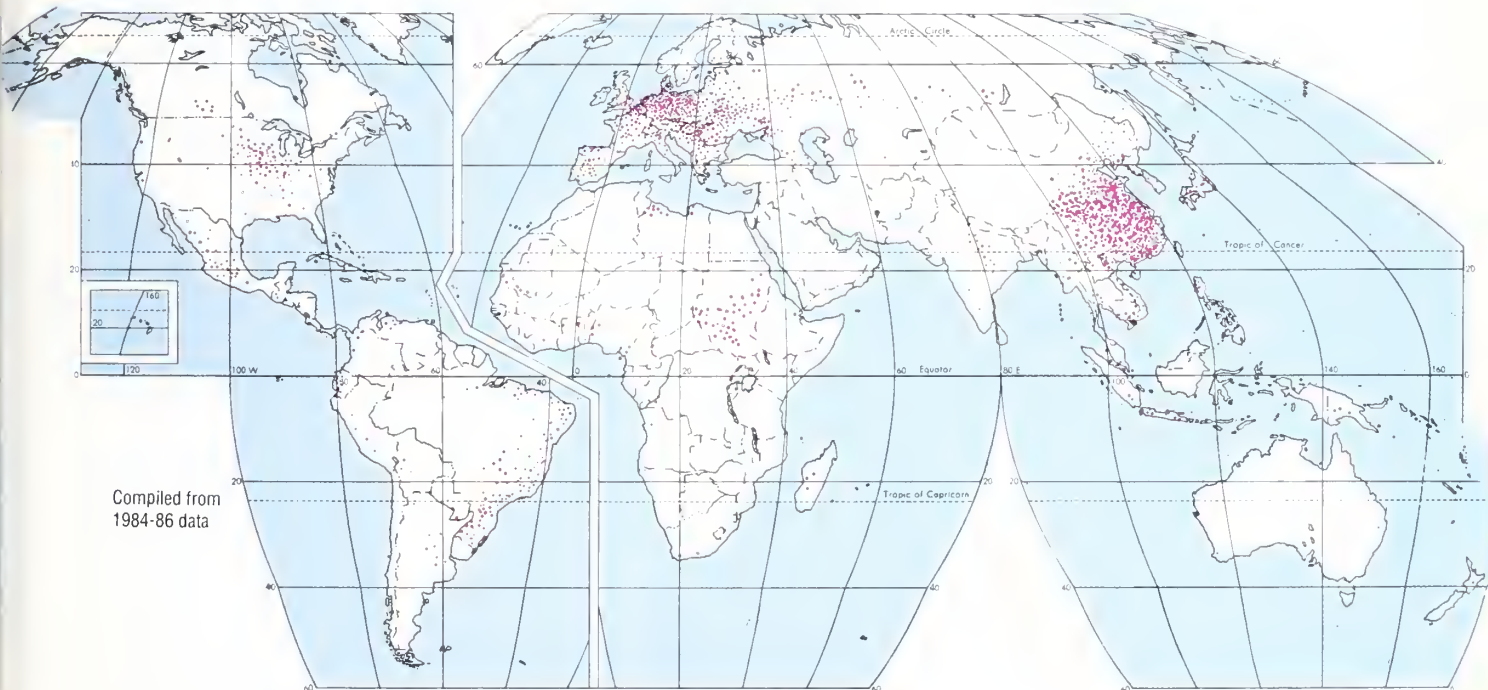


Where Cattle Are Produced



From Goode's World Atlas
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Where Hogs and Pigs Are Produced



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Corn Production and Trade



World Production Since 1970

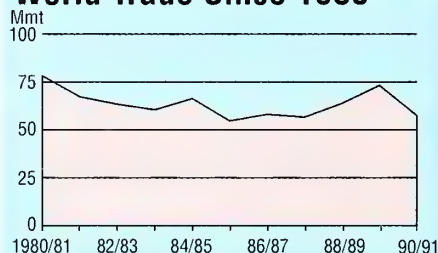
Million metric tons (mmt)



Top Producing Nations, 1990/91

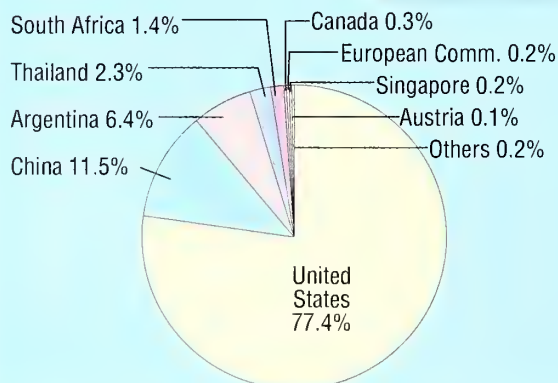
	Production	Share of world total
	mmt	percent
United States	201.53	42.1
China	96.82	20.2
Brazil	23.70	5.0
European Comm.	21.70	4.5
Mexico	14.10	2.9
Former USSR	9.80	2.1
India	9.40	2.0
South Africa	8.30	1.7
Argentina	7.60	1.5
Others	85.65	18.0
World total	478.60	100.0

World Trade Since 1980



Leading Exporters

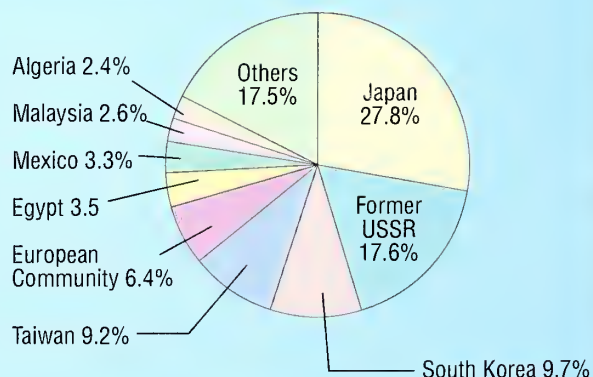
Share of total world exports, 1990/91



Total = 57.50 million metric tons

Leading Importers

Share of total world imports, 1990/91

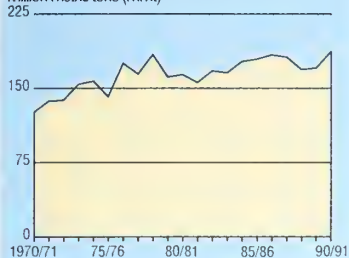


Total = 57.50 million metric tons

Source: Grain and Feed Division, Foreign Agricultural Service, USDA.

Barley and Sorghum Production and Trade

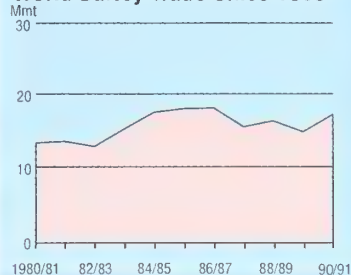
World Barley Production Since 1970
Million metric tons (mmt)



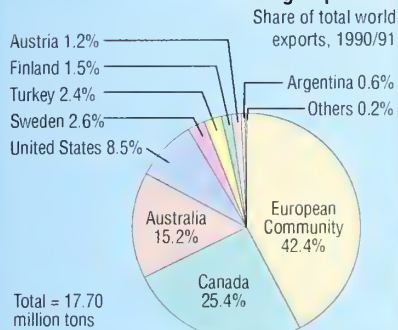
Top Producing Nations, 1990/91

	Production mmt	Share of world total percent
Former USSR	61.00	32.7
European Comm.	50.80	27.3
Canada	13.93	7.5
United States	9.19	4.9
Turkey	6.00	3.2
China	5.70	3.1
Poland	4.22	2.3
Australia	4.06	2.2
Czech-Slovak Rep.	4.05	2.1
Others	27.35	14.7
World Total	186.30	100.0

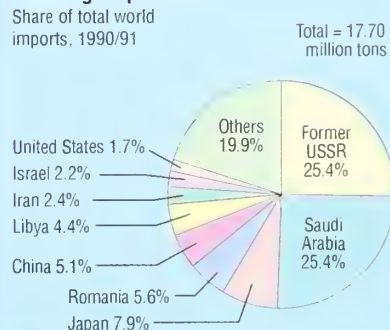
World Barley Trade Since 1980
Mmt



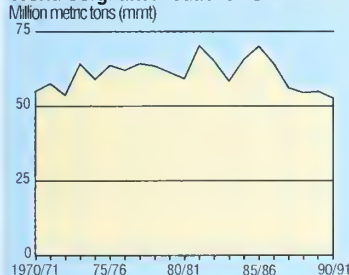
Leading Exporters



Leading Importers



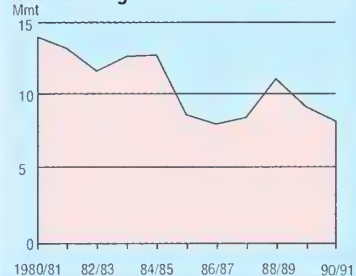
World Sorghum Production Since 1970
Million metric tons (mmt)



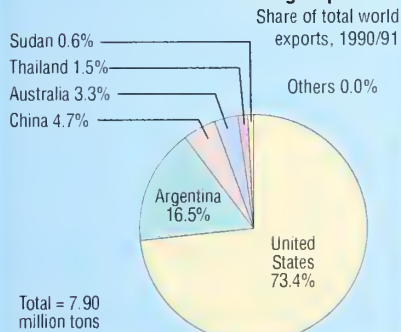
Top Producing Nations, 1990/91

	Production mmt	Share of world total percent
United States	61.00	32.7
India	50.80	27.3
China	13.93	7.5
Mexico	9.19	4.9
Nigeria	6.00	3.2
Argentina	5.70	3.1
Sudan	4.22	2.3
Ethiopia	4.06	2.2
Australia	4.05	2.1
Others	27.35	14.7
World Total	186.30	100.0

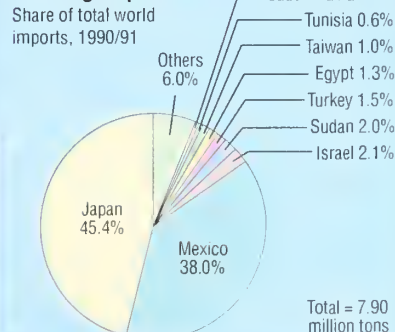
World Sorghum Trade Since 1980
Mmt



Leading Exporters

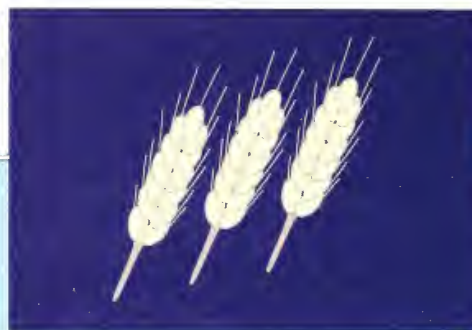


Leading Importers



Source: Grain and Feed Division, Foreign Agricultural Service, USDA.

Wheat Production and Trade



World Production Since 1970

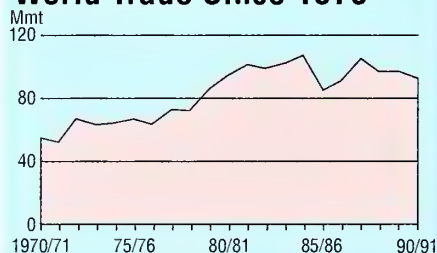
Million metric tons (mmt)



Top Producing Nations, 1990/91

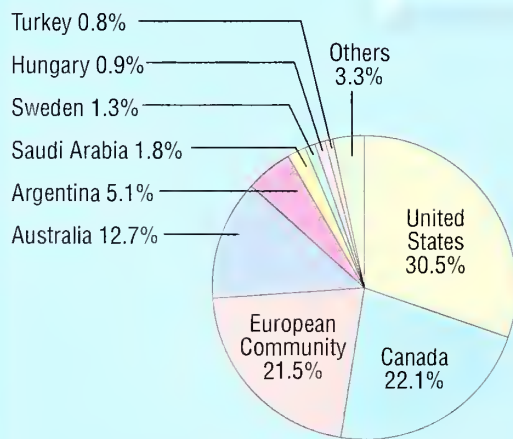
	Production	Share of world total
	mmt	percent
Former USSR	108.00	18.2
China	98.23	16.5
European Comm.	84.60	14.2
United States	74.47	12.5
India	49.85	8.4
Canada	32.71	5.5
Australia	15.07	2.5
Turkey	15.00	2.5
Pakistan	14.32	2.4
Others	101.85	17.3
World total	594.10	100

World Trade Since 1970



Leading Exporters

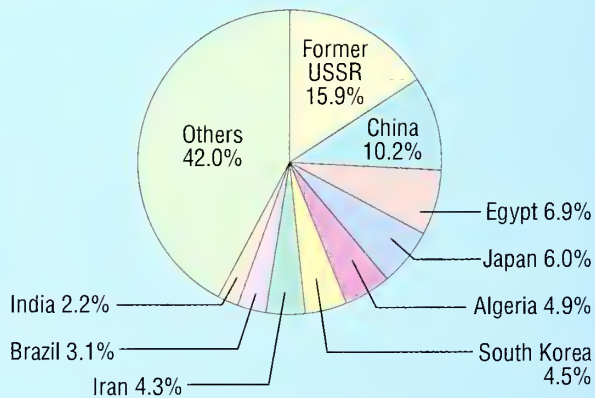
Share of total world exports, 1990/91



Total = 92.90 million metric tons

Leading Importers

Share of total world imports, 1990/91



Total = 92.90 million metric tons

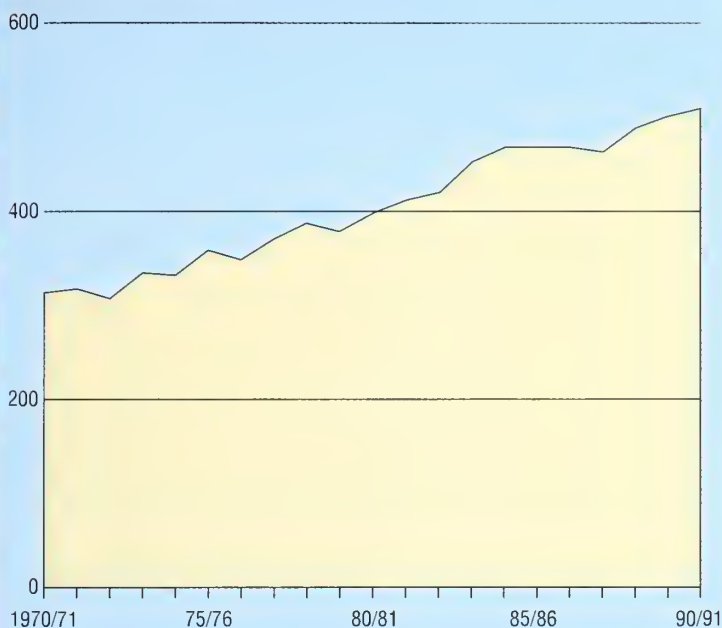
Exports include the grain equivalent of wheat flour. Data are reported on a July/June basis. Intra-EC trade is excluded. Data for Eastern Europe include the former East Germany.
Source: Grain and Feed Division, Foreign Agricultural Service, USDA.

Rice Production and Trade



World Production Since 1970

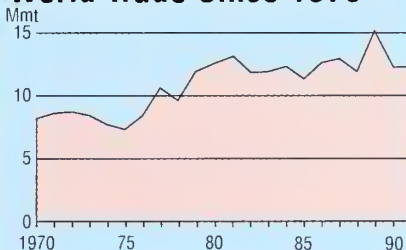
Million metric tons (mmt)



Top Producing Nations, 1990/91

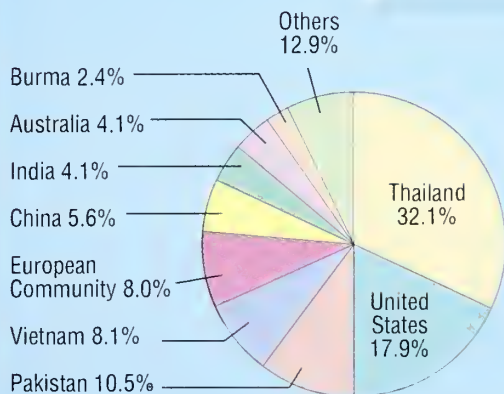
	Production	Share of world total
	mmt	percent
China	189.33	36.4
India	111.89	21.5
Indonesia	45.17	8.7
Bangladesh	26.90	5.2
Vietnam	17.90	3.5
Thailand	17.19	3.3
Burma	13.70	2.6
Japan	13.12	2.5
Philippines	9.88	1.9
Others	74.40	14.4
World total	519.50	100.0

World Trade Since 1970



Leading Exporters

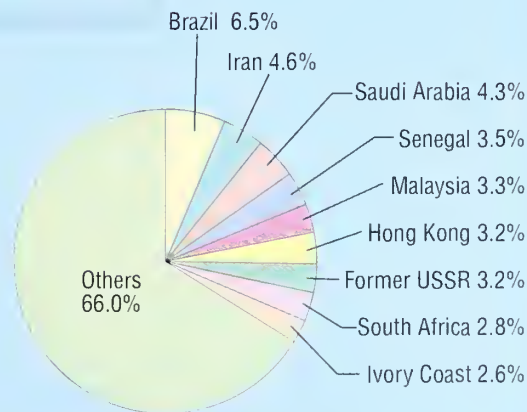
Share of total world exports, 1991



Total = 12.30 million metric tons

Leading Importers

Share of total world imports, 1991



Total = 12.30 million metric tons

Production data are for rough rice and are reported on a marketing year basis (aggregate of different local marketing years).
Trade data are for milled rice (intra-EC trade included) and are reported on a calendar year basis.
Source: Grain and Feed Division, Foreign Agricultural Service, USDA.

Oilseeds Production and Trade



World Production Since 1972

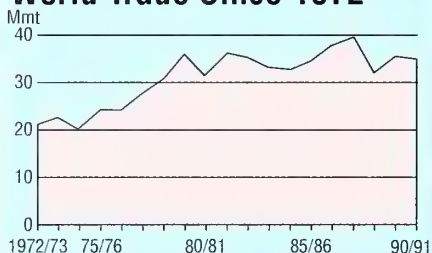
Million metric tons (mmt)



Top Producing Nations, 1990/91

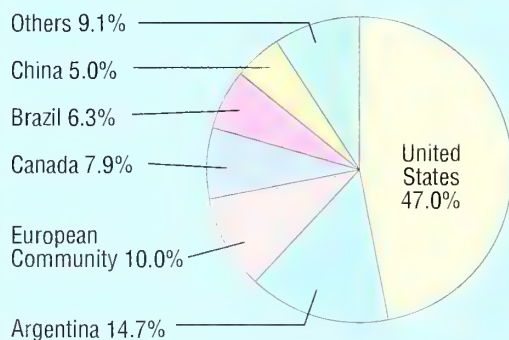
	Production	Share of world total
	mmt	percent
United States	60.7	27.9
China	33.3	15.3
India	21.4	9.8
Brazil	16.8	7.7
Argentina	16.3	7.5
Former USSR	13.0	6.0
European Comm.	10.9	5.0
Canada	5.6	2.6
Eastern Europe	4.3	2.0
Others	35.3	16.2
World total	217.8	100.0

World Trade Since 1972



Leading Exporters

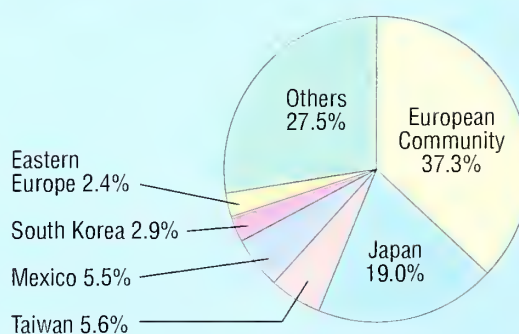
Share of total world exports, 1990/91



Total = 33.4 million metric tons

Leading Importers

Share of total world imports, 1990/91



Total = 35.5 million metric tons

Oilseed data include soybeans, cottonseed, peanut, sunflowerseed, rapeseed, flaxseed, copra, and palm kernel. Data are reported on a marketing year basis (aggregate of different local marketing years). Trade data include intra-EC trade. No adjustment is made for transit times, reporting discrepancies, and other factors that result in differences between world export and import totals. Source: Oilseeds and Products Division, Foreign Agricultural Service, USDA.

Cotton Production and Trade



World Production Since 1970

Million bales

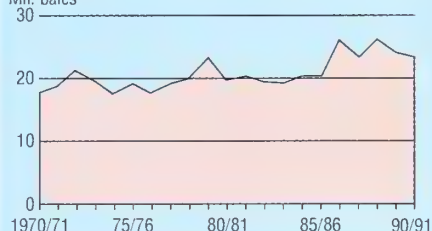


Top Producing Nations, 1990/91

	Production	Share of world total
	mil. bales	percent
China	20.70	24.0
United States	15.50	18.0
Former USSR	11.90	14.0
India	9.13	11.0
Pakistan	7.52	9.0
Brazil	3.20	4.0
Turkey	3.01	3.0
Australia	1.99	2.0
Egypt	1.38	1.6
Argentina	1.35	1.5
Paraguay	1.19	1.4
Others	10.09	10.5
World total	86.9	100.0

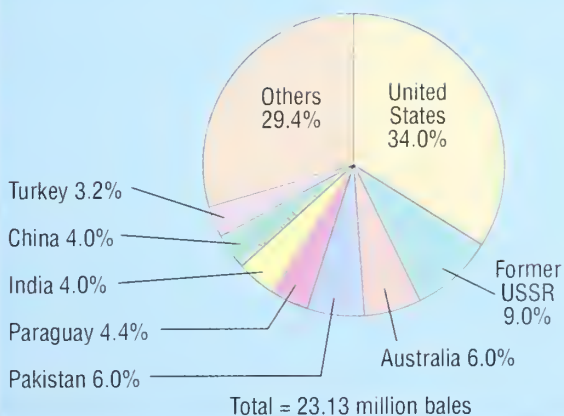
World Trade Since 1970

Mil. bales



Leading Exporters

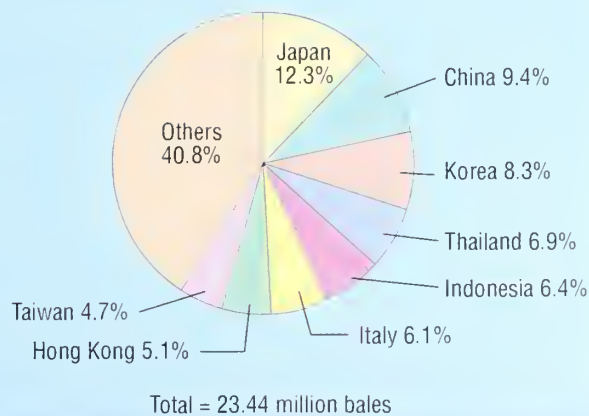
Share of total world exports, 1990/91



Total = 23.13 million bales

Leading Importers

Share of total world imports, 1990/91

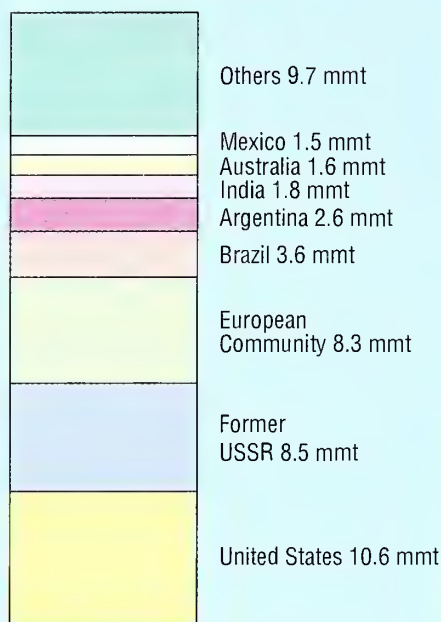


Total = 23.44 million bales

Data are reported on an August/July basis. Trade data include intra-EC trade. No adjustment is made for transit times, reporting discrepancies, and other factors that result in differences between world export and import totals.
Source: Tobacco, Cotton, and Seeds Division, Foreign Agricultural Service, USDA.

Beef and Pork Production and Trade

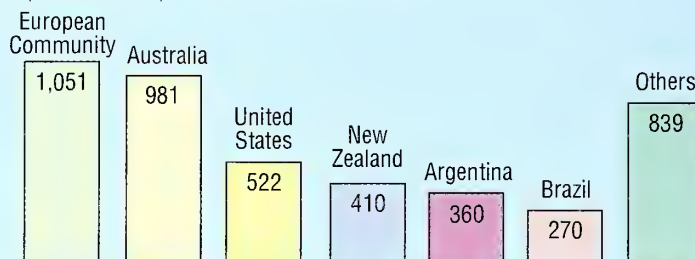
Leading Beef and Veal Producers, 1991



Total = 48.2 million metric tons

Leading Beef and Veal Exporters, 1991

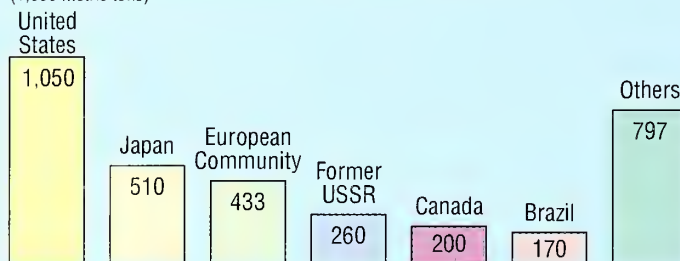
(1,000 metric tons)



Total = 4,433 thousand metric tons

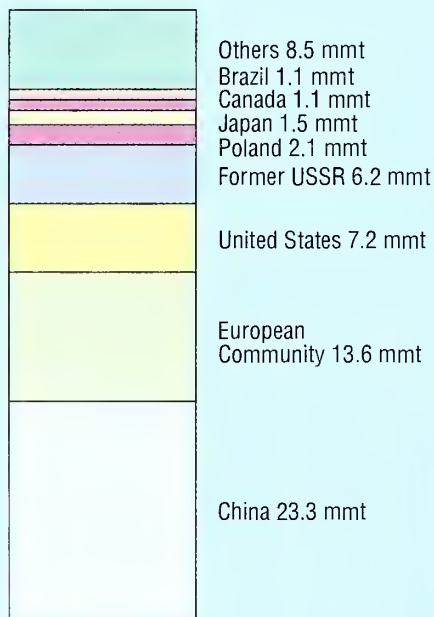
Leading Beef and Veal Importers, 1991

(1,000 metric tons)



Total = 3,420 thousand metric tons

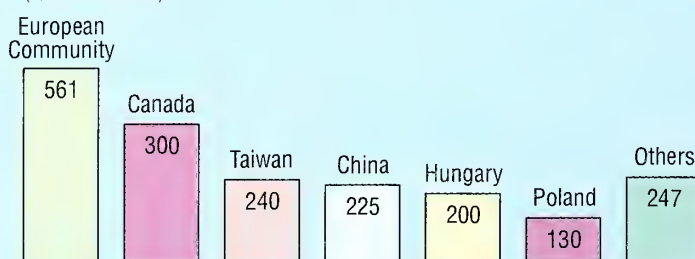
Leading Pork Producers, 1991



Total = 64.6 million metric tons

Leading Pork Exporters, 1991

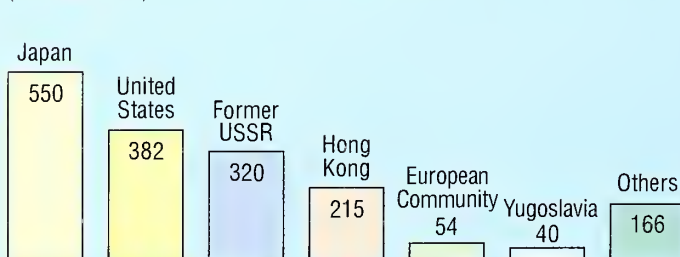
(1,000 metric tons)



Total = 1,703 thousand metric tons

Leading Pork Importers, 1991

(1,000 metric tons)

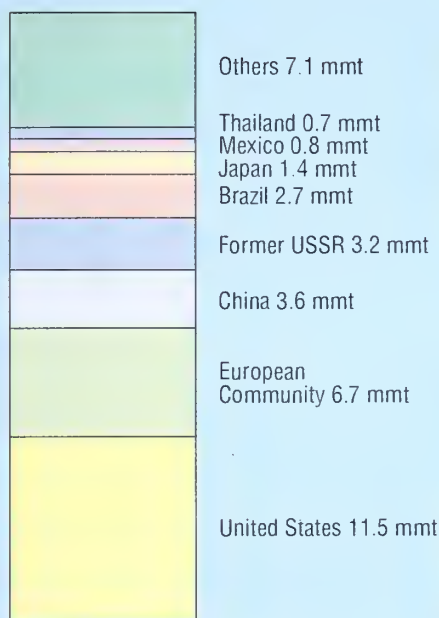


Total = 1,727 thousand metric tons

Trade totals exclude intra-EC trade. No adjustment is made for transit time, reporting discrepancies, and other factors that result in differences between world export and import totals.
Source: Dairy, Livestock, and Poultry Division, Foreign Agricultural Service, USDA.

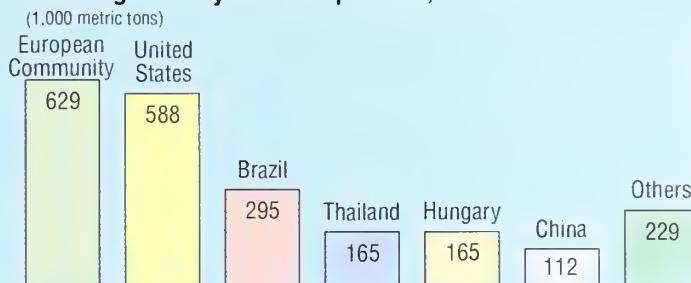
Poultry and Dairy Production and Trade

Leading Nations in Commercial Poultry Meat Production, 1991



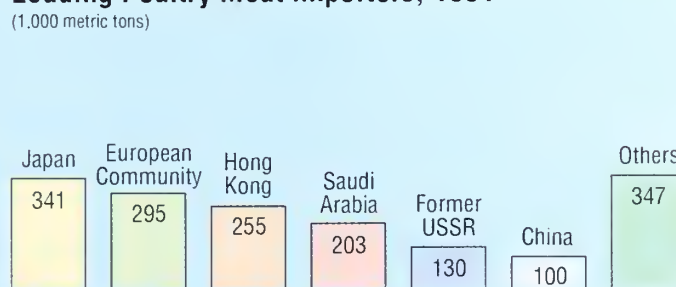
Total = 37.7 million metric tons

Leading Poultry Meat Exporters, 1991



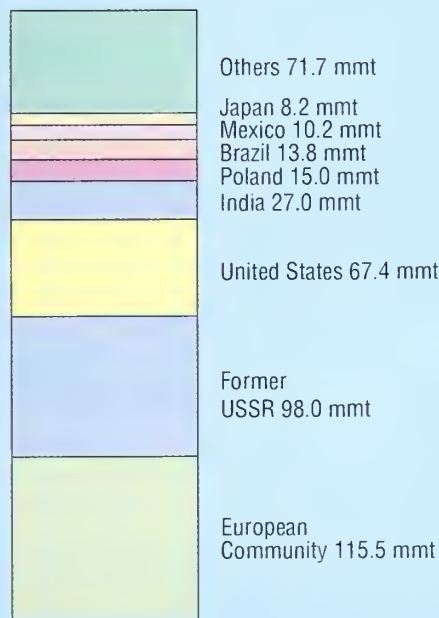
Total = 2,183 thousand metric tons

Leading Poultry Meat Importers, 1991



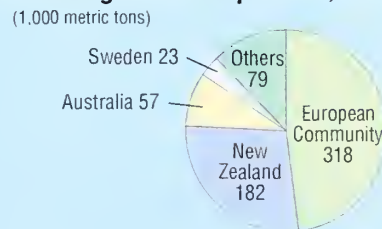
Total = 1,671 thousand metric tons

Leading Nations in Cow Milk Production, 1991



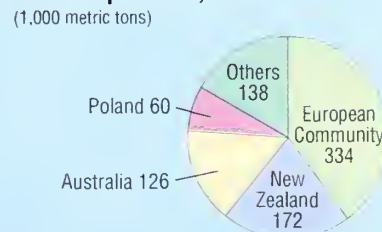
Total = 426.8 million metric tons

Leading Butter Exporters, 1991



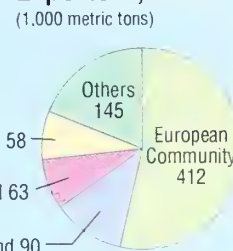
Total = 659 thousand metric tons

Leading Nonfat Dry Milk Exporters, 1991



Total = 830 thousand metric tons

Leading Cheese Exporters, 1991



Total = 768 thousand metric tons

Poultry data are for total poultry meat in ready-to-cook equivalents. Trade totals exclude intra-EC trade. No adjustment is made for transit time, reporting discrepancies, and other factors that result in differences between world export and import totals.

Source: Dairy, Livestock, and Poultry Division, Foreign Agricultural Service, USDA.

Leading Export Markets for U.S. Agricultural Products, 1991

All U.S. agricultural commodities U.S. exports: \$37.6 billion	1st Japan \$7.74 bil.	2nd Canada \$4.41 bil.	3rd Mexico \$2.88 bil.	4th S. Korea \$2.16 bil.	5th Former USSR \$1.76 bil.
	6th Taiwan \$1.74 bil.	7th Netherlands \$1.56 bil.	8th Germany \$1.13 bil.	9th United Kingdom \$883 mil.	10th Spain \$855 mil.
Feed grains & products U.S. exports: \$6.8 billion	1st Japan \$1.73 bil.	2nd Former USSR \$979 mil.	3rd Mexico \$622 mil.	4th Taiwan \$603 mil.	5th Netherlands \$330 mil.
	6th Spain \$261 mil.	7th S. Korea \$241 mil.	8th Saudi Arabia \$225 mil.	9th Egypt \$198 mil.	10th Algeria \$146 mil.
Soybeans & products U.S. exports: \$4.7 billion	1st Japan \$809 mil.	2nd Netherlands \$484 mil.	3rd Former USSR \$454 mil.	4th Taiwan \$413 mil.	5th Mexico \$399 mil.
	6th Spain \$244 mil.	7th S. Korea \$203 mil.	8th Canada \$187 mil.	9th Germany \$176 mil.	10th United Kingdom \$109 mil.
Live animals & meat (excluding poultry) U.S. exports: \$3.3 billion	1st Japan \$1.50 bil.	2nd Mexico \$519 mil.	3rd Canada \$515 mil.	4th S. Korea \$178 mil.	5th United Kingdom \$120 mil.
	6th France \$99 mil.	7th Belgium-Luxembourg \$52 mil.	8th Ireland \$28 mil.	9th Hong Kong \$26 mil.	10th Taiwan \$26 mil.
Wheat & products U.S. exports: \$3.1 billion	1st Japan \$401 mil.	2nd China \$330 mil.	3rd Egypt \$283 mil.	4th S. Korea \$204 mil.	5th Former USSR \$200 mil.
	6th Algeria \$160 mil.	7th Philippines \$150 mil.	8th Taiwan \$98 mil.	9th Pakistan \$93 mil.	10th Brazil \$70 mil.
Cotton & linters U.S. exports: \$2.6 billion	1st Japan \$536 mil.	2nd S. Korea \$401 mil.	3rd China \$301 mil.	4th Indonesia \$202 mil.	5th Italy \$163 mil.
	6th Thailand \$112 mil.	7th Taiwan \$112 mil.	8th Hong Kong \$88 mil.	9th Egypt \$88 mil.	10th Germany \$85 mil.
Vegetables & preparations U.S. exports: \$2.6 billion	1st Canada \$1.01 bil.	2nd Japan \$362 mil.	3rd Mexico \$178 mil.	4th United Kingdom \$97 mil.	5th Taiwan \$84 mil.
	6th Hong Kong \$75 mil.	7th Germany \$62 mil.	8th S. Korea \$44 mil.	9th Netherlands \$35 mil.	10th Bahamas \$34 mil.
Fruits & preparations U.S. exports: \$2.4 billion	1st Canada \$826 mil.	2nd Japan \$597 mil.	3rd Hong Kong \$125 mil.	4th United Kingdom \$115 mil.	5th Taiwan \$99 mil.
	6th Germany \$70 mil.	7th Netherlands \$66 mil.	8th France \$58 mil.	9th Mexico \$50 mil.	10th Singapore \$38 mil.

Tobacco (unmanufactured)

U.S. exports: \$1.5 billion

1st Japan \$313 mil.	2nd Germany \$249 mil.	3rd Netherlands \$130 mil.	4th Spain \$78 mil.	5th Dominican Republic \$65 mil.
6th Hong Kong \$63 mil.	7th Turkey \$62 mil.	8th Thailand \$58 mil.	9th Italy \$55 mil.	10th United Kingdom \$51 mil.

Hides & skins

U.S. exports: \$1.5 billion

1st S. Korea \$648 mil.	2nd Japan \$319 mil.	3rd Mexico \$131 mil.	4th Taiwan \$129 mil.	5th Canada \$59 mil.
6th Italy \$41 mil.	7th Hong Kong \$23 mil.	8th France \$15 mil.	9th Germany \$14 mil.	10th Switzerland \$12 mil.

Feeds & fodders

U.S. exports: \$1.1 billion

1st Japan \$363 mil.	2nd Canada \$198 mil.	3rd Netherlands \$142 mil.	4th Mexico \$40 mil.	5th France \$37 mil.
6th Ireland \$27 mil.	7th United Kingdom \$25 mil.	8th Spain \$23 mil.	9th Portugal \$22 mil.	10th Italy \$19 mil.

Poultry & products

U.S. exports: \$1.0 billion

1st Japan \$188 mil.	2nd Canada \$182 mil.	3rd Hong Kong \$124 mil.	4th Mexico \$112 mil.	5th Former USSR \$62 mil.
6th Singapore \$30 mil.	7th Leeward-Windward Islands \$24 mil.	8th S. Korea \$20 mil.	9th Saudi Arabia \$17 mil.	10th Jamaica \$16 mil.

Tree nuts

U.S. exports: \$820 million

1st Germany \$187 mil.	2nd Japan \$98 mil.	3rd Canada \$79 mil.	4th Netherlands \$50 mil.	5th Spain \$44 mil.
6th United Kingdom \$42 mil.	7th France \$42 mil.	8th Italy \$31 mil.	9th India \$18 mil.	10th Belgium-Luxembourg \$18 mil.

Rice

U.S. exports: \$749 million

1st Saudi Arabia \$83 mil.	2nd Brazil \$62 mil.	3rd Canada \$51 mil.	4th Haiti \$46 mil.	5th Turkey \$43 mil.
6th South Africa \$37 mil.	7th Switzerland \$31 mil.	8th Liberia \$29 mil.	9th Netherlands \$26 mil.	10th Mexico \$26 mil.

Seeds

U.S. exports: \$618 million

1st Italy \$92 mil.	2nd Mexico \$87 mil.	3rd Canada \$57 mil.	4th Saudi Arabia \$50 mil.	5th France \$49 mil.
6th Japan \$46 mil.	7th Netherlands \$27 mil.	8th Germany \$20 mil.	9th Spain \$17 mil.	10th United Kingdom \$11 mil.

Data are for fiscal year 1991 (Oct. 1, 1990, to Sept. 30, 1991) and include U.S. commercial and concessional exports. U.S. exports to the Netherlands, a major transshipment port, include a substantial value for products consigned to the Netherlands but actually destined for other countries. Tobacco exports do not include cigarettes, cigars, and other manufactured products. Exports of solid wood products, valued at \$6.4 billion in fiscal year 1991, are not included in the above data.

Source: Agricultural economist Cecil W. Davison, Economic Research Service, USDA.

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